

AN
UNIVERSAL SYSTEM
OF
NATURAL HISTORY,

INCLUDING THE
NATURAL HISTORY OF MAN;
THE ORANG-OUTANG;
AND
WHOLE TRIBE OF SIMIA;
ALL THE KNOWN
QUADRUPEDS, BIRDS, FISHES,
AND
AMPHIBIOUS ANIMALS;
INSECTS, POLYPOES, ZOOPHYTES, AND ANIMALCULÆ;
TREES, SHRUBS, PLANTS, AND FLOWERS;
FOSSILS, MINERALS, STONES, AND PETREFACTIONS.

FORMING A MAGNIFICENT VIEW OF
THE THREE KINGDOMS OF NATURE,
Divided into DISTINCT PARTS, the Characters SEPARATELY
DESCRIBED, and SYSTEMATICALLY ARRANGED.

VOLUME THE FOURTH.

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UNIVERSITY OF CHICAGO

NATIONAL HISTORY

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THE
SIX ORDERS OF BIRDS;
ACCORDING TO
THE CLASSIFICATION
OF
SIR CHARLES LINNÆUS.

ORDER I. ACCIPITRES.

THE CHARACTERS of this order are: *Bill* somewhat hooked downwards, the upper mandible dilated near the point, or armed with a tooth: *nostrils* open; *legs* short, strong; feet formed for perching, having three toes forwards and one backwards; toes warty under the joints; claws hooked and sharp-pointed; *body* muscular; flesh tough and not fit to be eaten; *food* the carcases of other animals, which they seize and tear; *nest* in high places; *eggs* about four; *female* larger than the male. They are monogamous, i. e. live in pairs. This order includes the four following genera: 1. Vultur, the vultures. 2. Falco, the eagles, buzzards, falcons, and hawks. 3. Strix, the owls. 4. Lanius, the shrikes, or butcher-birds.

ORDER II. PICÆ.

The CHARACTERS of this order are: *Bill* sharp-edged, convex above; *legs* short, strong; *feet* formed for walking, perching, or climbing; *body* toughish, impure; *food* various filthy substances; *nest* in trees; the *male* feeds the female while she is sitting. They live in pairs; and consist of the following twenty-three genera: 1. Psittacus, the maccaws, parrots, and parakeets. 2. Ramphastos, the toucans. 3. Buceros, the hornbills. 4. Buphaga, the beef-eater. 5. Crotophaga, the ani. 6. Glaucopis, the wattle-bird. 7. Corvus, the ravens, crows, rooks, daws, magpies, and jays. 8. Coracias, the roller. 9. Oriolus, the oriole. 10. Gracula,

ii LINNÆAN CLASSIFICATION.

the grackle. 11. Paradisea, the paradise birds. 12. Trogon, the curucui. 13. Bucco, the barbet. 14. Cuculus, the cuckoo. 15. Yunx, the wryneck. 16. Picus, the woodpecker. 17. Alcedo, the jacamars and kingfishers. 18. Sitta, the nuthatch. 19. Todus, the tod. 20. Merops, the bee-eater. 21. Upupa, the hoopoe, and promerops. 22. Certhia, the creepers. 23. Trochilus, the colibri, or humming-birds.

ORDER III. ANSERES.

The CHARACTERS of this order are: *Bill* smooth, covered with a soft skin and broader at the point; *feet* formed for swimming; toes palmate, connected by a membrane; shanks short, compressed; *body* fat, downy; flesh mostly tough; *food* fish, frogs, aquatic plants, worms, &c. *nest* mostly on the ground; the *mother* takes but little care in providing for the young. They are frequently polygamous. This order contains the thirteen following genera: 1. Anas, the swan, goose, and duck tribes. 2. Mergus, the merganser. 3. Alca, the auk. 4. Aptenodytes, the penguin. 5. Procellaria, the petrel. 6. Diomedea, the albatros. 7. Pelecanus, the pelican. 8. Plotus, the darter. 9. Phaeton, the tropic bird. 10. Colymbus, the guillemot, grebe, and diver. 11. Larus, the gulls and mews. 12. Sterna, the terns and noddies. 13. Rhynchops, the skimmer.

ORDER IV. GRALLÆ.

The CHARACTERS of this order are: *Bill* subcylindrical; *legs* formed for wading; having all the toes distinct; thighs half naked; *body* compressed, covered with a thin skin; flesh delicate; *tail* short; *food* marsh animalcules; *nest* chiefly on the ground. They live variously; and consist of the twenty following genera: 1. Phoenicopterus, the flamingo. 2. Platalea, the spoon-bill. 3. Palamedea, the screamer. 4. Mycteria, the jabiru. 5. Cancroma, the boat-bill. 6. Scopus, the umbre. 7. Ardea, the herons, cranes, storks, egrets, and bitterns. 8. Tantalus, the ibis. 9. Corriia, the runner. 10. Scolopax, the curlews, woodcocks, snipes, and godwits. 11. Tringa, the lapwing or pewit, ruff and reeve, sandpiper, turnstone, and phalarope. 12. Charadrius, the plover. 13. Recurvirostra, the avoet. 14. Hamatopus, the oyster-catcher. 15. Glareola, the pratincole. 16. Fulica, the gallinules, water-hens, and coots. 17. Vaginalis,

LINNÆAN CLASSIFICATION. iii

17. Vaginalis, the sheath-bill. 18. Parra, the jacana. 19. Rallus, the rail. 20. Psophia, the trumpeter.

ORDER V. GALLINÆ.

The CHARACTERS of this order are: *Bill* convex, the upper mandible arched over the lower; *nostrils* arched over with a cartilaginous membrane; *legs* formed for running; toes rough underneath; *body* fat, muscular, and excellent eating; *food* grain and seeds, which they scratch from the ground and macerate in the crop; *nest* on the ground, made with little care; *eggs* numerous. They are polygamous, fond of rolling in the dust, and teach the young to collect food. This order contains the ten following genera: 1. Otis, the bustard. 2. Struthio, the ostrich. 3. Didus, the dodo. 4. Pavo, the peacock. 5. Meleagris, the turkey. 6. Penelope, the turkey pheasant. 7. Crax, the curassow. 8. Phasianus, the cock, and common poultry, and every species of pheasant. 9. Numida, the pintado or Guinea fowl. 10. Tetrao, the grouse, partridges, quails, and tinamous.

ORDER VI. PASSERES.

The CHARACTERS of this order are: *Bill* conic, pointed; *legs* formed for hopping; toes slender, divided; *body* slender; *flesh* of such as feed on grain pure, of those which feed on insects impure; *nest* formed with wonderful art. They live chiefly in trees and hedges, are monogamous, vocal, and feed the young by thrusting the food down their throats. This order contains the seventeen following genera: 1. Columba, the columbine or pigeon. 2. Alauda, the lark. 3. Sturnus, the stare or starling. 4. Turdus, the thrush and blackbird. 5. Ampelis, the chatterer. 6. Colius, the coly. 7. Loxia, the crossbills, grosbeaks, &c. 8. Emberriza, the bunting. 9. Tanagra, the tanager. 10. Fringilla, the sparrows, linnets, canaries, liskins, goldfinches, and all other finches. 11. Phytotoma, the plant-cutter. 12. Muscicapa, the flycatcher. 13. Motacilla, the nightingale, and all the warblers, wagtails, petty-chaps, wheat-eats, whin-chats, stone-chats, white-throat, black-cap, red-start, grey-start, red-breast, and wren. 14. Pipra, the manakin. 15. Parus, the titmouse. 16. Hirundo, the swallow and swift. 17. Caprimulgus, the night-hawk, or goatfucker.

OF THE PARTS OF BIRDS.

THE HEAD.

1. **BILL** (*rostrum*), is a hard horny substance, consisting of an upper and under mandible. Its edges generally plain and sharp, like the edge of a knife, *cultrated*, as are the bills of crows; but sometimes *ferrated*, as in the toucan; or *jagged*, as in the gannet and some herons; or *pectinated*, as in the duck; or *denticulated*, as in the mergansers; but always destitute of real teeth immersed in sockets. The base in vultures and falcons is covered with a naked skin or cere (*cera*); in some birds with a carneous appendage, as the turkey; or a callous, as the curassow. In birds of prey, the bill is hooked at the end, and fit for tearing; in crows, straight and strong for picking; in water-fowl, either long and pointed, for striking; or slender and blunt, for searching in the mire; or flat and broad, for gobbling. Its other uses are for building nests: feeding the young; climbing, as in parrots; or, lastly, as an instrument of defence or offence.

2. **NOSTRILS** (*nares*), the nice instruments of discerning their food, are placed either in the middle of the upper mandible, or near the base, or at the base, as in parrots; or behind the base, as in toucans and hornbills; but some birds, as the gannet, are destitute of nostrils. The nostrils are generally naked: but sometimes covered with *bristles* reflected over them, as in crows, or hid in the feathers, as in parrots, &c. The fore part of the head is called the *front* (*capistrum*); the summit (*vertex*), or the *crown*; the hind part, with the next joint of the neck (*nucha*), the *nape*; the space between the bill and the eyes, which in herons, grebes, &c. is naked, the *lores* or *straps*, (*lora*); the space beneath the eyes the *cheeks*, (*genæ*).

3. **ORBITS** (*orbitæ*), the eyelids; in some birds naked, in others covered with short soft feathers. Birds have no eyebrows: but the grouse kind have in lieu a scarlet naked skin above, which are called *supercilia*; the same word is also applied to any line of a different colour that passes from the bill over the eyes.

4. **EARS**. Birds are destitute of auricles or external ears, having an orifice for admission of sound: open in all but owls, whose ears are furnished with valves.

5. The

LINNÆAN CLASSIFICATION. v

5. The CHIN, the space between the parts of the lower mandible and the neck, is generally covered with feathers; but, in the cock and some others, has carneous appendages called *wattles* (*palearia*); in others naked, and furnished with a pouch, capable of great dilatation (*sacculus*), as in the pelican and corvorants.

6. NECK (*collum*), the part that connects the head to the body is longer in birds than in any other animals; and longer in such as have long legs than in those that have short, either for gathering up their meat from the ground, or striking their prey in the water, except in web-footed fowl, which are, by reversing their bodies, destined to search for food at the bottom of waters, as swans, &c. Birds, especially those that have a long neck, have the power of retracting, bending, or stretching it out, in order to transfer their centre of gravity from their legs to their wings.

THE BODY.

1. Consists of the BACK (*dorsum*), which is flat, straight, and inclines; terminated by the

2. RUMP (*uropygium*), furnished with two glands, secreting a fattish liquor from an orifice each has, which the birds express with their bills to oil or anoint the discomposed parts of their feathers. These glands are particularly large in most web-footed water-fowl; but in the grebes, which want tails, they are smaller.

3. BREAST (*pectus*), is ridged and very muscular, defended by a forked bone (*clavicula*), the merry-thought. The short-winged birds, such as grouse, &c. have their breasts most fleshy or muscular; as they require greater powers in flying than the long-winged birds, such as gulls and herons, which are specifically lighter and have greater extent of sail.

4. BELLY (*abdomen*), is covered with a strong skin, and contains the entrails.

5. The VENT, or vent-feathers (*crissum*), is between the thighs and the tail. The anus lies hid in those feathers.

THE LIMBS.

1. WINGS (*alæ*), adapted for flight in all birds, except the dodo, ostriches, cassowary, great auk, and the penguins, whose wings are too short for the use of flying; but in the dodo and ostrich, when extended, serve to accelerate their motion

vi LINNÆAN CLASSIFICATION.

motion in running; and in the penguins perform the office of fins, in swimming or diving. The wings have near their end an appendage covered with four or five feathers, called the *bastard* or *spurious wing* (*ala notha*), and *alula spuria*. The lesser coverts (*teltrices*), are the feathers which lie on the bones of the wings. The greater coverts are those which lie beneath the former, and cover the quill-feathers and the secondaries. The quill-feathers (*primores*), spring from the first bones (*digiti* and *metacarpi*) of the wings, and are ten in number. Quill-feathers are broader on their inner than exterior sides. The secondaries (*secundaria*), are those that rise from the second part (*cubitus*), and are about eighteen in number, are equally broad on both sides. The primary and secondary wing-feathers are called *remiges*. A tuft of feathers placed beyond the secondaries near the junction of the wings with the body, common in water-fowl, is generally longer than the secondaries, cuneiform, and may not unaptly be called the *tertials*. The scapulars are a tuft of long feathers arising near the junction of the wings (*brachia*) with the body, and lie along the sides of the back, but may be easily distinguished, and raised with one's finger. The inner coverts are those that clothe the under side of the wing. The subaxillary are peculiar to the greater paradise-birds. The wings of some birds are instruments of offence. The anhimas of Marcgrave has two strong spines or spurs in the front of each wing. A species of plover has a single one in each wing; the whole tribe of jacana, and the gambo, or spur-winged goose, has the same.

2. The TAIL is the director, or rudder, of birds in their flight; it consists of strong feathers (*rectrices*), ten in number, as in the woodpeckers, &c. twelve in the hawk tribe, and many others; in the gallinaceous, the mergansers, and the duck-kind, of more. It is either even at the end, as in most birds, or forked, as in swallows, or cuneated, as in magpies, &c. or rounded, as in many birds. The grebe is destitute of a tail, the rump being covered with down; and that of the cassowary with the feathers of the back. Immediately over the tail are certain feathers that spring from the lower part of the back, and are called the *coverts of the tail* (*uropygium*).

3. THIGHS (*femora*), are covered entirely with feathers in all land birds, except the bustards and the ostriches; the lower

LINNÆAN CLASSIFICATION. v.;

lower part of those of all waders, or cloven-footed water-fowl, are naked; that of all webbed-footed fowl the same, but in a less degree; in rapacious birds, are very muscular.

4. **LEGS** (*crura*), those of rapacious fowls very strong, furnished with large tendons, and fitted for tearing and a firm gripe. The legs of some of this genus are covered with feathers down to the toes, such as the golden eagle; others to the very nails; but those of most other birds are covered with scales, or with a skin divided into segments, or continuous. In some of the pies, and in all the passerine tribe, the skin is thin and membranous; in those of web-footed water-fowl, strong. The legs of most birds are placed near the centre of gravity: in land birds, or in waders that want the back toe, exactly so; for they want that appendage to keep them erect. Auks, grebes, divers, and penguins, have their legs placed quite behind, so are necessitated to sit erect; their pace is awkward and difficult, walking like men in fetters; hence Linnæus styles their feet *pedes compedes*. The legs of all cloven-footed water-fowl are long, as they must wade in search of food; of the palmated, short, except those of the flamingo, the avoet, and the courier.

5. **FEET** (*pedes*), in all land birds that perch, have a large back toe: most of them have three toes forward, and one backward. Woodpeckers, parrots, and others birds that climb much, have two forward, two backward; but parrots have the power of bringing one of their hind toes forward while they are feeding themselves. Owls have also the power of turning one of their fore toes backward. All the toes of the *swift* turn forwards, which is peculiar among land birds; the *trydactylous* woodpecker is also anomalous, having only two toes forward, one backward; the ostrich is another, having but two toes.

6. **TOES** (*digiti*). The toes of all waders are divided: but, between the exterior and middle toe, is generally a small web, reaching as far as the first joint. The toes of birds that swim are either plain, as in the single instance of the common water-hen or gallinule; or pinnated, as in the coots and grebes; or entirely webbed or palmated, as in all other swimmers. All the plover tribe, or charadrii, want the back toe. In the swimmers the same want prevails among the albatrosses and auks. No water-fowl perch,

perch, except certain herons, the corvorant, the moor-hen, and the shag.

7. **CLAWS** (*ungues*). Rapacious birds have very strong, hooked, and sharp, claws, vultures excepted. Those of all land birds that roost on trees have also hooked claws, to enable them to perch in safety while asleep. The gallinaceous tribe have broad concave claws for scraping up the ground. Grebes have flat nails like the human. Among water-fowl, only the skua, and the black-toed gull, have strong hooked or aquiline claws. All land birds perch on trees, except the struthious and some of the gallinaceous tribes. Parrots climb: woodpeckers creep up the bodies and boughs of trees: swallows cling.

The parts of birds will be better understood by inspecting the annexed engraving, where *a*, fig. 1. shews the upper mandible; *b*, the under mandible; *c*, the front; *d*, the chin; *e*, the crown; *f*, the hind-head; *g*, the nape; *h*, the scrag, or neck above; *i*, the neck and throat; *k*, the breast; *l*, the belly; *m*, the shoulders; *n*, the spurious wing; *o*, the lesser wing-coverts; *p*, the greater wing-coverts; *q*, the primary quill-feathers; *r*, the secondary quill-feathers; *s*, the scapulars; *t*, sub-axillaries; *u*, inner wing-coverts; *v*, the rectrices, or tail; *w*, the vent; *x*, the thighs; *y*, the legs; *z*, the feet and toes.

Fig. 2. A bill furnished with a tooth-like process, and bristles at the base: *a*, the lores; *b*, the temples; *c*, the cheeks.

Fig. 3. A bill with the upper mandible hooked at the point, and furnished with a cere at the base, in which are placed the nostrils.

Fig. 4. A flat bill, pectinated at the edges, and furnished at the tip with a claw or nail.

Fig. 5. A foot formed for perching: three toes before and one behind. Fig. 6. An ambulatory, or walking foot, having a spur behind. Fig. 7. A climbing foot: two toes before and two behind. Fig. 8. A palmate or webbed foot. Fig. 9. A semipalmate or half-webbed foot. Fig. 10. A lobate foot. Fig. 11. A pinnate or finned foot.



The Parts of Birds.

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J. F. G. engr.



AN UNIVERSAL
S Y S T E M
OF
NATURAL HISTORY.

OF B I R D S.

OF B I R D S in GENERAL.

AS we proceed from the history of quadrupeds to inquire into that of the feathered race, which constitutes the second great class of the animal kingdom, we find nature in this department possessing the same vivifying power. Here she seems still more prolific, and more diversified in her operations. Whether we examine her productions in the earth, the air, or the sea, we find no space unoccupied, nor mark indicating that her powers are exhausted or fatigued. In all her families of quadrupeds, birds, insects, and fishes, she sports with unabating luxuriance, and teems with fecundity. The naturalist, in every step he advances in his inquiries, meets with multiplied and irresistible evidences of the existence of a creative mind. The power, wisdom, and munificence, of the great parent of the universe, in proportion as he becomes acquainted with their effects, begin to force themselves upon his mind, with all the energy of conviction. Thus, Nature is silent only to those who know not how to interrogate her. To the man of an inquisitive mind, she offers ample instruction, with regard to the rank he holds in the works of creation, to the materials of his
A 2 enjoyment,

4 NATURAL HISTORY

enjoyment, to the number and variety of those creatures which he is destined to govern; and while she thus displays before him the extent of his obligations, she also leads him to a knowledge of that Being to whom he owes them.

Hence, the study of nature, by enlarging our ideas of his works, and by exalting our veneration of the Supreme Being, advances the knowledge of religion, and enforces the obligations of virtue. It is attended also with numberless other benefits to human life; and it is only among men of little genius, and less application, that it has appeared a dry, frivolous, and idle, employment. In the progress of society from a rude to a civilized state, the knowledge and domestication of animals have always been deemed an important æra in its history, and have operated with decisive influence on the condition of man. Without the ministry of animals, his operations on nature around him are extremely feeble and limited, many of the animals being naturally superior to him in size, courage, and strength. Without this, his dominion over them must prove rather nominal than real: he is a master without servants; a monarch who has no subjects.

If, from the ministry of quadrupeds, man derives his most considerable assistance in maintaining his influence over the soil, it is to the feathered race he is indebted for many of his pleasures, and for his most innocent enjoyments: among them he has friends of zealous and steady attachment, and few enemies of any force or inveteracy. The race of birds seems peculiarly formed by the hand of nature to please his senses. By the richness and brilliancy of their colours, the melody of their voices, the beauty and elegance of their form, they charm the eye of the beholder, and soothe his ear, delight and captivate his imagination. By these qualities, they invariably afford him pleasure, whether he contemplate the melodious grove, the screaming precipice, or the noisy forest: by these they cheer his solitude; they
animate

animate and adorn the scenes of nature. The examination of their instincts for the purposes of preserving the life of the individual, or of perpetuating the species; their attachments, their aversions, the whole of their manners and economy, afford subject of admiration, and present views of the wisdom of Providence equally pleasing and instructive. Those who enjoy the leisure of a country life, might innocently relieve the burden of many a vacant hour, did they direct to the works of nature that inquisitive spirit which is too often exercised in trivial and officious researches into the conduct of their neighbours. While they thus found a harmless and agreeable employment for their talents, they would relieve society of two very considerable evils,—idleness and slander.—There are others who are invited to this study by still more urgent motives. Such as practise the arts that are imitative of nature, poetry, painting, and sculpture, cannot be successful without a competent knowledge of the originals from which their imagery is drawn. Men of a studious and sedentary life, in searching for an agreeable relaxation to their minds, pay a necessary condescension to human weakness. These, amid the inhabitants of the grove, might innocently beguile the dream of life, and find an useful relaxation from the severity of wisdom. The world is the theatre on which all men are destined to be employed and amused; and they cannot be sufficiently interested in the scenes that are displayed before them, who are altogether unacquainted with the objects of which they are composed. “The mere uninformed spectator passes on in gloomy solitude; while the naturalist, in every plant, in every insect, and in every pebble, finds something to entertain his curiosity and excite his speculation.”

With all these allurements, the history of birds, or science of ornithology, has been but little studied, and is far from having arrived at that degree of perfection to which the knowledge of quadrupeds has been car-

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6 NATURAL HISTORY

ried. Of two thousand different species of birds, which Linnæus supposes inhabit the earth, and his computation is perhaps far below their actual number, between fifteen and sixteen hundred are all that are yet known; and many of these have been but lately and imperfectly described. Birds are not only more numerous than quadrupeds, but are also subject to much greater varieties, and less confined in their habitation. It is a rule which Nature seems to have prescribed to herself, that the smaller her progeny is, the more numerous and diversified does she produce it. The larger animals, which procreate seldom, and in small numbers, have but few species nearly allied to them; while the smaller are related to many kindred tribes, and each species is subject to much variety. Agreeable to this rule, birds, from the multiplicity of their number, and the smallness of their size, are infinitely more varied in the same species, than even the lesser quadrupeds. In the latter class, too, the difference between the male and the female is generally so slight as to occasion but few mistakes; whereas, among birds, the female is often so distinguished from her mate, both by size and colour, that some eminent naturalists have mistaken them for different species, and have arranged them accordingly.

In order, therefore, to obtain an accurate knowledge of this division of the animal kingdom, an individual of each species will not suffice; two, and sometimes four, of the same kind, must come under the inspection of the naturalist, because the young are frequently different from the adult of the same kind. If, then, there are two thousand different species of birds, the naturalist who would describe them accurately must have examined eight thousand individuals. Besides this circumstance, there are many other diversities produced by climate and food, by domestication and captivity, by natural and forced migrations. All these obstacles combine together against the ornithologist, and increase the

the difficulty of his labours, when considered merely in the light of a nomenclator, whose sole province it is to distinguish the animals from each other, and to assign them their names. How hard, then, must his task prove, when he attempts to delineate their manners and detail their economy!

The quadruped is in some degree fixed in his residence, and therefore forced to submit to the laws of the climate in which he is produced: hence, by knowing the continent, or part of the continent, where he resides, you obtain some general outlines to direct you in giving his particular history. With regard to the bird, even this is wanting: his faculty of traversing a vast space in a short time, renders him almost independent of climate. A regular supply of food is the principal circumstance that determines his habitation; and as that is procured, at different seasons of the year, in very distant quarters of the world, you are obliged to follow his route, and examine his manners in all the remote regions through which he passes. To furnish a history of birds, as complete as that of quadrupeds, must, on these accounts, necessarily prove the work of ages; and, from these causes, M. Buffon justly asserts, that the number and characters of birds are still in an ocean of obscurity.

In travelling through this multifarious group, we shall avail ourselves of every light that may prevent our wandering, and freely consult every writer of authority who has already arranged or described this part of the animal kingdom. The natural history of birds comprehends two distinct objects: 1st, the discovering and classification of every individual, and assigning it a name; and, 2dly, the describing its manners and economy. The first, which is the most difficult part of the subject, is also the least agreeable: it is dry, mechanical, and incomplete. The second exhibits new pictures to the imagination; and, by leading to the discovery of final causes, opens delightful views of the
economy

8 NATURAL HISTORY

economy of Nature, and of the wisdom of Providence. Both are necessary to those who would understand this science in its utmost extent; both, accordingly, have been attempted by ornithologists, in those systems which they have composed, in order to explain this department of nature.

When we enquire into the history of ornithology at various periods, we find it in three different stages of improvement. To the first of these it was brought by Aristotle and Pliny, who are almost the only authors of antiquity who seem to have directed their attention to this branch of science. They, however, contented themselves with seizing upon the great outlines of natural knowledge; passing by what appeared trivial or common, they dwelt principally on whatever was new, marvellous, or astonishing. Like historians who describe the operations of a campaign, they have characterised the generals, but left it to meaner hands to carry the muster-roll. Despising the minutiae of a dry detail, they amuse the reader, and warm his imagination, not unfrequently at the expence of truth. The moderns, who, after the revival of learning, resumed this subject, have treated it in a manner totally different: they have divided birds into their different orders, genera, and species, according as they appeared analogous, either from their habits or external form. By thus classing together birds resembling each other, in one distinct family, they have facilitated this study, and given the subject a scientific arrangement.

Their systems, though useful to the profound naturalist, prove tedious and uninteresting to the ordinary reader: they present to him a dry detail of names; a fatiguing repetition of colours, shades, sizes, and shapes, of similar animals, which he may have recourse to as a dictionary, but which must unavoidably disgust, should he attempt a continued perusal. Their successors, in later times, with that judgment and good sense which they have carried into every department of science, have

have endeavoured to unite these different aims. They have joined the history of their manners and economy to scientific arrangement: they have blended the dry details of the nomenclator with the more entertaining displays of the life and conversation of these animals that are worthy of the philosopher or historian.

M. Belon, a French author, is the first among the moderns who applied himself to this study, and may be regarded as the father of systematic ornithology. By arranging such birds into separate orders and families, as he deemed analogous in their manners or external characters, he exalted his subject to the dignity of a science. Were we to judge of him by the extent of his travels in Europe, Asia, and Africa, undertaken at his own expence, we could not hesitate to pronounce him an eager inquirer into nature. His work, however incomplete it may now appear, yet, considering the infancy in which he found the science, displays considerable accuracy of observation, and entitles the author to no small degree of reputation. If he has marked out the way, and cleared it of its most striking difficulties, we owe him much; for it is certainly easier to make advances in a path that has already been trod by others, than to venture through the unexplored wild, lying still in primeval confusion.

After the year 1555, in which Belon published his history of birds, he was immediately succeeded by a long list of writers, who followed or improved his system. Gesner in Switzerland, Aldrovandus in Italy, Johnston in Holland, published each a system of ornithology. Few additions, however, of any importance, were made to the natural history of birds, till the appearance of our countryman, the Hon. Francis Willoughby. He seems to have been impelled to the study of nature by the original bent of a strong genius, which his ample fortune enabled him to indulge. His travels were extensive, and his knowledge proportioned to his ardour in the pursuit of it. Though he died at

an early period, he had figured and described a greater number of birds, and with more accuracy, than any former naturalist. His papers came into the hands of his preceptor Mr. Ray, and were published in 1678. To him they are probably indebted for that excellent arrangement, which constitutes the chief merit of a work, which is acknowledged, at the present day, to be the most valuable on this part of the animal kingdom. It is by his system, as far as method and arrangement are concerned, that we shall be chiefly guided in the following history of birds; adopting, however, the late improvements made upon it by Mr. Pennant. We shall here subjoin what this author advances in favour of Mr. Ray's arrangement, in his preface to a small treatise, intituled *The Genera of Birds*, which he published in 1773.

“ Mr. Ray, and his illustrious pupil the Hon. Francis Willoughby, assumed Belon's plan; but, with great judgment, flung into their proper stations, and proper genera, those which he had confusedly mixed together. They formed the great division of terrestrial and aquatic birds; they made every species occupy their proper place, consulting at once exterior form, and natural habit. They could not bear the affected intervention of aquatic birds in the midst of terrestrial birds. They placed the last by themselves, clear and distinct from those whose haunts and economy were so different.” Various attempts have been made to alter this system of our countrymen. It is a disagreeable and invidious task to expose the defects of other methodists, who may have, in many respects, great merit. I leave this to the peevish malignity of the minute critics; therefore shall only acknowledge the sources from which I draw the materials of the present work. Mr. Ray's general plan is so judicious, that to me it seems scarcely possible to make any change in it for the better; yet, notwithstanding he was in a manner the founder of systematic zoology, later discoveries have made a few improvements

improvements on his labours. My candid friend Linnæus will not take it amiss, that I in part neglect his example; for I permit the land-fowl to follow one another, undivided by the water-fowl, the *grallæ* and *anseræ* of his system; but, in my generical arrangement, I most punctually attend to the order he has given in his several divisions, except in those of his *anseræ*, and a few of his *grallæ*. For, after the manner of M. Brisson, I make a distinct order of water-fowl with pinnated feet, placing them between the waders, or cloven footed water-fowl and the web footed. The ostrich, and land birds with wings uselefs for flight, I place as a distinct order. The trumpeter (psophia of Linnæus) and the bustards, I place at the end of the gallinaceous tribe: all are land birds: the first *multiparous*, like the generality of the gallinaceous tribe; the last *granivorous*, swift runners, avoiders of wet places: and both have bills somewhat arched. It must be confessed, that both have legs naked above the knees, and the last, like the waders, lay but few eggs. They seem ambiguous birds, that have affinity with each other; and it is hoped, that each naturalist may be indulged the toleration of placing them as suits his own opinion."

To the six orders of the feathered race, which Linnæus lays down in his system of nature, we have added three other orders, which may be considered as subdivisions of his (*anseræ et grallæ*) ducks and waders, as explained by the following table.

DIVISION I. Land-birds.	{	I. Rapacious,	Accipetres of Linnæus.
		II. Pies,	Picæ.
		III. Gallinaceous,	Gallinæ.
		IV. Collumbine,	Passeres.
		V. Passarine,	Passeres.
		VI. Struthious,	{ Gallinæ. Grallæ.
DIVISION II. Water-fowl.	{	VII. Cloven footed, or waders,	{ Grallæ.
		VIII. Pinnated feet,	{ Anseres. Grallæ.
		IX. Web footed,	{ Anseres.
			{ Grallæ.

In the choice of their habitation, birds are directed by the nature of their food, and their habits of life. Though, therefore, the air seems to be the element in which they are destined to sport; yet, as they derive their sustenance from the surface of the earth or water, there is among them a variety apparently equal to the different species of food which these different elements produce. By this economy of nature, animals are infinitely more numerous than they could have been, had they been all rivals for the same kind of nourishment. Flesh, fishes, insects, grain, or vegetables, are every where to be found in greater or less abundance on the earth, or in the water. Accordingly, the barren desert, as well as the cultivated field, the stormy ocean, and the small rivulet, the mountain and the plain, are all stored with these inhabitants, which they supply with food and accommodation suited to their natural wants.

From the food and habitation of birds, however, naturalists have in vain attempted to class them: one obvious and striking division nature herself seems to have pointed out, that of birds who live on land, and those who live in water. It is easy to distinguish land from water fowl, by their legs and feet: but an arrangement so comprehensive goes but a little way in enabling us to distinguish the different genera from each other, much less to ascertain the multiplied varieties which are sometimes to be found among those of the same tribe. This is a work of great difficulty; and one which the most accomplished naturalist is perhaps unable perfectly to execute. To dip profoundly into it, would prove a task equally tedious and unprofitable. Upon such frivolous discussions, we will not enter; conscious that from these every judicious reader will withdraw his attention, and place it upon such objects as promise more liberal amusement, or more important information.

Of the external CHARACTERS of BIRDS.

BY the foregoing arrangement we have deviated but little from the celebrated Swedish naturalist Linnæus, whose reputation as a systematic writer is universally acknowledged. In order to ascertain their external characters, we shall consult M. Brisson of the royal academy of sciences at Paris, whose work is perhaps the most extensive and accurate of any on this science. Many of the latter years of Mr. Reaumur's life had been employed in collecting birds from every different quarter of the world: he left his collection to the public, under the management of M. Brisson, who, from that copious source of information, published a large treatise, consisting of six quarto volumes, containing a description of fifteen hundred different species of birds, with accurate figures. Buffon, with perhaps more genius and eloquence than were ever applied to this science, has given a still more voluminous history of birds, but without observing any arrangement. In tracing their manners and economy, we shall avail ourselves of his ideas of a subject, which he has adorned with all the elegance of style, and the bright colouring of a lively imagination. Had our countryman Goldsmith been as attentive to his information as to the richness, variety, and elegance, of his language, he would have rendered future attempts almost unnecessary: but, in endeavouring to condense his narrative, the chain is often broken, and from too eager a desire to amuse, his history frequently bears the air of a romance. To use his own words, "he has treated what he conceived to be an idle science, in an idle manner." Mr. Pennant, who possesses more accuracy and better information, has amassed in his *British Zoology* a valuable store of knowledge: but his work is too voluminous, and perhaps too dry and systematic for common readers. Besides these great systematic historians, several authors have given treatises of a local

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cal nature. White has made us acquainted with the natural history of Selborne; Smith with that of the county of Kerry; Marcgrave has described the birds of Brazil; Sir Hans Sloane those of Jamaica; and Catesby those of Florida, Carolina, Virginia, and the Bahama islands. With these abundant resources, the ornithologist can scarcely want information: his greatest difficulty will be found in condensing and arranging his materials, so as to render his narrative of moderate length, and of general utility.

Birds have always been considered as a separate and detached class of animals: it is not, however, by their power of flying alone, that they have been thus distinguished. A species of the squirrel, and the bat among quadrupeds, and the flying fish among the finny tribes, are endowed with the same faculty. On the other hand, birds of the struthious kind, as the dodo and the ostrich, from their immense weight, are wholly prevented from ascending into the regions of the air by means of their wings. Still, however, birds in their external characters differ remarkably from other animals; they are distinguishable by their covering of feathers; by their wings; the instruments of flight; by the form of their legs and feet, and the whole of the outward structure. They are destitute of teeth, lips, external ears, and scrotum: they differ also in many parts of their internal conformation; having no epiglottis, no diaphragm, nor urinary bladder.

The terms used by naturalists in the description and classification of birds, are sufficiently technical and obscure: they are chiefly employed in discriminating these three parts; the head, the body, and the limbs: (*caput, truncus, et artus.*) Almost every peculiarity in the external structure of birds is adapted to the element which they inhabit, and conducive to swiftness of motion. To facilitate their passage through the air, the body in the fore part is sharp, beginning with a pointed bill, and thickening by a gradual swell along
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the head and neck, till it reaches its greatest bulk ; then falling off, and terminating in an expansive tail. The body itself is slender, containing a cavity for respiration, much larger in proportion than that of other animals ; a circumstance which contributes greatly to their lightness ; as does also thin and porous nature of their bones, which are much lighter than those of quadrupeds of the same size.

The feathers, that covering which nature has provided for this class of the animal kingdom, are wonderfully adapted to the purposes intended ; security, warmth, and celerity of motion. They are divided by naturalists into the down, the smaller feathers, and the the quills ; (*floccæ, plumæ, et pennæ.*) The former are nearest the skin, and in high latitudes are a protection against cold and rain. The *floccæ* are soft, short, and unconnected ; and are most abundant in the aquatic tribes, particularly those of the duck kind. Those feathers which cover the body, and are properly the plumage of the bird, have small shafts, and large vanes ; and are never exerted or relaxed, unless in anger, fright, or illness. They are all placed so as to cover one another like tiles, permitting the water to run off, while they exclude the cold.

The strongest feathers or quills are placed in those parts of the body where they have most duty to perform. They have large shafts, hollow at the lower end, but filled at the upper with a pith, convex above, and concave beneath, which serves to give nourishment to the vanes on each side. These vanes are broad on the one side, and narrow on the other ; each consisting of a number of thin *laminæ* ; stiff, and of the nature of a split quill. The different *laminæ* are braced together by the elegant contrivance of a multitude of small bristles ; those on the one side being hooked, and the other strait ; they lock into each other, and keep the vanes smooth, compact, and strong. The vanes being thus adjusted, and the feathers lying close by each other,

other, when spread, no part of them can miss its impulse upon the air.

As the slender substance of feathers is apt to be decomposed by accident, or the excessive heat or moisture of the atmosphere, nature has made an extraordinary provision for their adjustment, and preservation in a proper temperament. Of this Goldsmith has given the following very accurate account. The animal is furnished with a gland behind, containing a proper quantity of oil, which can be pressed out by the bird's bill, and laid smoothly over every feather that wants to be dressed for the occasion. This gland is situated on the rump, and furnished with an opening or excretory duct; about which grows a small tuft of feathers, somewhat like a painter's pencil. When, therefore, the feathers are shattered or rumped, the bird, turning its head backward, with the bill catches hold of the gland, and, pressing it, forces out the oily substance, with which it anoints the disjointed parts of the feathers; and drawing them out with great assiduity, recomposes and replaces them in due order; by which they unite more closely together. Such poultry, however, as live for the most part under cover, are not furnished with so large a stock of this fluid as those birds that reside in the open air. The feathers of a hen, for instance, are pervious to every shower; on the contrary, swans, geese, ducks, and all such as nature has directed to live on the water, have their feathers dressed with oil from the first day of their leaving the shell. Thus their stock of fluid is equal to the necessity of its consumption. Their very flesh contracts a flavour from it, which renders it in some so very rancid, as to make it utterly unfit for food; however, though it injures the flesh, it improves the feathers for all the domestic purposes to which they are usually converted.

Next to the feathers, we are to consider the other parts that have been reckoned descriptive of the generic characters of birds. The marks taken from
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plumage are precarious indications of the species to which they belong: the more important characters of birds are all taken by Linnæus from the unfeathered parts; as the beak, caruncles, nostrils, and feet: and in this principle, which he has adopted with regard to arrangement, he has been deservedly followed by many other naturalists. The bill in all birds consists of two mandibles; the upper and the lower: the former is uniformly fixed, except in the genus of parrots; which nature has endowed with the power of moving the upper mandible at pleasure, to assist it in climbing. None of the feathered race have teeth; some indeed have the mandibles serrated, as the toucans and mergansers; but these *serræ* are not immersed in sockets. In falcons, the base of the rostrum is covered with skin, called the *cere*: in the turkeys it is covered with a carneous appendage. The nostrils of birds are generally of an oval form, placed near the base of the upper mandible; the organs of smell, in gannets, are altogether wanting.

The wings of birds, though not much considered in their classification, are by far their most conspicuous instruments of motion; and in every genus, except the struthious, they are adapted for flight, which is accomplished chiefly by means of the flag-feathers, called *remiges*. The largest of these, denominated *primary*, are situated on the extremity of the wing; and are generally eight or ten in number: the *secondary* are placed nearer to the body of the animal; are always shorter, and commonly of a different shape and colour. Two species of penguins are destitute of these flag-feathers; with them the wings perform the office of fins, in swimming and diving. The larger feathers of the tail, naturalists have termed *rectrices*, from their being the director or rudder of the animal in flight; for, besides serving to counterbalance their foreparts, they enable the bird to rise, descend, or turn, at pleasure. They

feldom exceed ten or twelve, unless in the ducks and geese, where they are more numerous.

Birds differ remarkably in the form of their feet, according to their manner of life. The feet have obtained various technical names, as they seemed fitted for perching, walking, running, swimming, or diving. Hence they are stiled in the Linnæan system, *gressorii*, *ambulatorii*, *cursorii*, *natatorii*, et *scansorii*. For the first of these purposes, those seem best adapted who have three toes on the anterior part of the foot, and one backward, with the two outward toes partly connected by a membrane; among the walkers, this membrane is not to be found. The natatory birds have their feet either wholly palmated, or pinnated, as in cootes and grebes, or semi-palmated, as in the American spoon-bill. The parrots, woodpeckers, and other tribes addicted to climbing, have two toes forwards, and two backwards. The ostrich, the swiftest of all running birds, is in this respect anomalous, having only two toes. All the external parts of birds appear to be formed for rapidity of motion in that element they are destined to inhabit; all contribute to facility of escape; the shape and lightness of the body, its covering of feathers, the large size of the wings, and the force of those muscles by which they are moved. From the combined operation of these qualities, their swiftness far exceeds that of the rein-deer or horse, the fleetest among quadrupeds. Thirty leagues in one day, according to M. Buffon, is the utmost either can travel; whereas an hawk or an eagle, he asserts, can traverse a space of two hundred leagues in ten hours; and, in support of this, he relates the story from Sir Edmund Scot, of the hawk sent from the Canaries to the Duke of Lerma, which returned from Andalusia to the island of Teneriffe in sixteen hours, a space of two hundred and fifty leagues.

When we proceed to examine the structure of the organs of sight, we find that they are no less adapted to the

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the purpose of celerity. In all birds, except the nocturnal ones, the head is smaller in proportion to the body than that of quadrupeds; their eyes, too, are more flat and depressed, that they may the more easily divide the air, and make way for the body. In comparing the sense of sight in this class, with that of quadrupeds, it is found more quick, distinct, and extensive; and the apparent exception of owls is rather a confirmation of this fact, as the dimness of their sight arises from the extreme sensibility of the organ; a mark of its perfection. The eyes of fowls seem indeed more industriously laboured by the hand of nature, than those of other animals. Though outwardly they appear small, yet, both taken together, they are larger than the brain; whereas the orbit of the human eye is not the twentieth part of the brain. Anatomists have, besides, observed a particular expansion of the optic nerve, in this organ of birds, which renders the impressions of external objects more vivid and distinct. To protect the eye, and perhaps moderate its extreme sensibility, it is possessed of a nictitating membrane, with which it can instantaneously cover the pupil of the eye, when the eye-lids are open. From such a structure of the eye, the sense of seeing in birds is greatly superior to that of other animals. Nature, having destined them for rapid motion, has wisely provided for their safety, by the acuteness of that sense which directs it. To the same velocity of movement, had she joined dullness of sight, these qualities would have been contrary and incompatible; had the animal availed itself of the former, it must have been dashed to pieces by unforeseen resistances, from the imperfection of the latter. Add to this, that acuteness of sight seems necessary for procuring this animal's support: an hawk, accordingly, from a height in the sky at which it is scarcely perceptible by the human eye, perceives a lark upon the ground, and darts upon it with unerring precision.

It hath been already observed, that all birds want the external ear; they are furnished indeed with apertures, which convey sounds into the auditory canal. Their sense of hearing is very acute, as may be conceived from their power of song, and of modulating the voice, and from the readiness with which they repeat sounds, and learn to pronounce words. This faculty, the bounty of nature has conferred upon them as an additional mean of security. Surrounded as they are by man, and other tribes of hostile animals, their safety greatly depends, while in darkness, or amidst the thick groves, on being duly apprised of their approach by the quickness and sensibility of this organ.

Buffon is of opinion that several of the quadrupeds are superior to birds in the sense of smelling: in many many of the latter, however, it is extremely delicate and acute. The raven and the vulture wind their prey at an immense distance, and perhaps surpass the dog or the fox: nor are we to imagine that those birds who have no external apertures in the bill, are deprived of this sense, which may be communicated by the entrance of the effluvia at the mouth. It is remarked by Goldsmith, that in decoys, where ducks are caught, the men who attend them, universally keep a burning turf near their mouths, lest the fowl should smell their breath, and consequently fly away. The universality of this practice puts the necessity of it beyond a doubt, and proves the extreme delicacy of the sense of smelling in this species of the feathered creation.

Notwithstanding this perfection of their senses, birds fall as far short of quadrupeds in sagacity and intelligence, as they are distinguished by these particulars above insects and fishes, the ranks of animated beings immediately below them. Shy in their nature, and jealous of their liberty, they avoid the haunts of man; and, with too much justice, view him as their tyrant or destroyer. Even those which we call domestic, are much less susceptible of sentiments of attachment or obedience,

obedience, than our other servants of the animal race : they render us no service during their lives, and only become useful by their death ; they are victims which we multiply without trouble, and sacrifice without pity or regret. Some of them we educate for the chase, and teach to carry their game ; others we so far tame as to render them familiar ; and, by the force of habit, we almost make them attached to their prisons ; but all these sentiments are slight and delible, compared with those which we can transfer to quadrupeds. What comparison is there between the attachment of a dog, and the familiarity of a parrot ; or between the intelligence of an elephant, and that of an ostrich ?

There is one instance, indeed, in which they discover an astonishing docility, and seem to surpass that degree of intelligence which nature has allotted to their order ; and that is, their faculty of imitating and repeating sounds. Though we suspend our belief of the great musical talents, which some are said to have acquired by education, we find many well-attested instances of a delicate ear in some birds no way remarkable for vocal execution. Madame Piozzi relates of a tame pigeon, that it answered by gesticulation to every note of the harpsichord. As often as she began to play, it hurried to the concert, with marks of rapturous delight. A false note produced in the animal evident tokens of displeasure ; if frequently repeated, it lost all temper, and tore her hands. In some birds, the ear is sufficiently delicate and precise to enable them to catch and retain a continued series of sounds, and even of words ; hence proceed their musical powers ; hence, too, their faculty of speaking. Of the parrot, we have heard many wonderful exertions of eloquence, which rather tend to evince the surprise of mankind at the docility of an animal so insipid, than to prove any real attainment. He receives words without understanding them ; his voice, by its flexibility, enables him to repeat them ; but he gives them back as he received them : he articulates,

culates, but does not speak ; for with him articulation does not proceed from thought, the principle of speech ; it is merely an imitation, which represents nothing of what passes within the animal, nor expresses any of his affections.

When we consider the voice of birds, independent of the influence of man, and separate what is acquired from what is natural ; when we observe them in their wild and free state, we perceive that the voice is not only modified by their affections, but that it is renewed, strengthened, changed, or extinguished, according to these, and the temperature of the season. As the voice, of all their faculties, is most easy, and least troublesome in its exercise, they ply it with a frequency that seems to border on excess ; nor is it the females, as we might believe, that are most remarkable for the abuse of this organ ; among birds, they are more grave and silent than the males. Like the cattle, they utter cries of fear or of sorrow ; they can express solicitude and concern for their young ; but, to the far greater number, nature seems to have denied the gift of song. The singing of the feathered race seems to be the expression of their happiness, and of their soft and agreeable emotions : by these circumstances it is produced ; with these it varies ; and, when they cease, it is extinguished. The nightingale, on his first arrival in spring, begins not yet to sing : he is silent till he has found a mate ; and his song is at first short, hesitating, and unfrequent ; he ventures not a full, loud, and well-supported, note, till he sees his female charged with the fruits of his love. During the whole period of nestling, laying, and incubation, he grows more and more assiduous in his caresses, and endeavours to relieve her cares by every charm of song. What proves the voice of this bird to be solely the expression of love, is, that with that passion it ceases. The female has no sooner begun to hatch, than she ceases to sing ; and, towards the end of June, the male becomes silent.

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also, or expresses himself in a harsh and frightful croaking note, more resembling the noise of a reptile than his former melodious strains. Every species of bird is not equally eloquent; some are copious and fluent in their utterance, while others are confined to a few important sounds: no bird, like the fish kind, is quite mute; but some are rather silent. The notes of the rapacious are shrill and piercing; and, in the season of nidification, much diversified. Ravens, besides their loud croak, can utter a deep and hollow note, that makes the woods to echo: doves coo in an amorous and mournful manner, and are emblems of despairing lovers. All the passerine tribes express their complacency by sweet modulations, and various melody. Aquatic and gregarious birds, especially such as shift their quarters in the dark, are very noisy and loquacious: their perpetual clamour prevents them from dispersing and losing their companions.

No birds possess greater variety of expression, or a more copious language, than our common poultry. Of all the occurrences of their life, that of laying seems to be the most important; for no sooner has a hen disburdened herself, than she rushes forth with a clamorous kind of joy, which the cock and the rest of his mistresses immediately adopt: the tumult catches from yard to yard, and spreads to every homestead within hearing, till at last the whole village is in an uproar. As soon as the hen becomes a mother, her new relation demands a new language: she then runs clucking and screaming about; and seems agitated, as if possessed. The father of the flock has also a considerable vocabulary; if a bird of prey passes over, with a warning voice he bids his family beware. The gallant chanticler has, at command, his amorous phrases, and his terms of defiance: but the sound, by which he is best known, is his crowing; by this, he has in all ages been distinguished as the countryman's clock or larum, as the watchman that proclaims the divisions of the night.

Some of the gaudy birds, and particularly the peacock, have notes peculiarly grating and shocking to the ear; the yelling of cats, or the braying of an ass, is not more disgusting. And of birds, in general, it may be observed, that from the structure of their throat and lungs, their voice is much more loud and piercing than that of quadrupeds. The screams of a peacock are heard at a greater distance than the bellowing of an ox, although it is hardly the fiftieth part of the size.

Of the FLIGHT, PLUMAGE, and MIGRATION, of BIRDS.

IT is remarked by a skilful naturalist, that to be a complete ornithologist, one should be able to distinguish birds by their air, as well as by their colours and shape; on the ground as well as on the wing, and in the bush as well as in the hand. For though it cannot be said that every species of birds has a manner peculiar to itself; yet there is somewhat, in most genera at least, that at first discriminates them. Put a bird in motion; and the judicious observer can pronounce upon it with certainty:

Nam vera incessu patuit.

Thus the kites and buzzards sail round in circles, with wings expanded, and motionless; and it is from their gliding manner that the former, in the north of Britain, has obtained the name of gleads. There is a peculiarity in ravens, that must strike the most inquisitive observer; they spend all their leisure time in diving and cuffing at each other on the wing in a playful manner; and, when they move from one place to another, frequently turn on their backs with a loud croak, as if about to fall to the ground. When this accident happens, they are scratching themselves with one foot, and thus lose their centre of gravity. Parrots, like all other hook-clawed birds, walk awkwardly, and make use of their bill as a third foot, climbing and descending with ridiculous caution. All the order
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of gallinæ (poultry) parade and walk gracefully, and run swiftly; they fly, however, with difficulty, and in a strait line, with an impetuous noise. Most of the small birds fly by jerks, or hop when on the ground: the skylark rises and falls perpendicularly while it sings; the woodlark hangs poised in the air; and the titlark rises and falls in large curves, and is melodious only while descending.

Several observations worthy the notice of the naturalist, are obtained from the flight of birds, and their uniform appearance in particular places at stated seasons. A considerable part of the superstitions in the polytheism of ancient Greece and Rome had no other foundation than the accidental flight of birds, or their manner of taking their food. A great body of their priests were called *haruspices*, from their being employed watching the motions of these animals. An enterprise was deemed auspicious, or the contrary, according as their motions were reported favourable, or otherwise. But, superstition apart, the experienced sailor derives information from the flight of birds, in which he is deeply interested. The man-of-war bird has a very different flight at sea from what it has when near the land: in the former case, it soars high in the region of the air, and its motion is slow; in the latter, it flies much quicker, and nearer to the surface of the water. Hence sailors, by observing its manner of flight, can conjecture pretty nearly their distance from land. The phaeton ætherius is another bird whose appearance is useful to navigators. It is always found within the tropics, never venturing to the north or south of either; whenever, then, this bird is observed, the seamen are with certainty informed of their being in the intra-tropical latitudes. There is also a bird of a peculiar nature, found always within a short distance of the Cape of Good Hope, and therefore called the *procellaria Capensis*. As the appearance of this bird indicates to the sailors their approach to the Cape, it

is often useful to the Indiamen in doubling that promontory. The *procellaria pelagica*, as often as it approaches a ship, and gets into the wake, the sailors, by constant observation, find that they are invariably overtaken by a storm. This fowl is called by the English, the petterel; but, from its being thus a bird of bad omen, the mariners have denominated it the devil's chicken. In the northern parts of Scotland, the people employed in the herring fishery are often indebted to the *larus parasiticus*, and the solan geese, for discovering the shoals of fishes. The birds that feed upon herrings are indeed the surest guides of the fishers; both are engaged in the same employment; both are in quest of the same object: Nature, however, to compensate for the want of reason, has endowed the former with means of attaining their end, much more certain and efficacious than the lords of the creation can command, after all their boasted improvements in science and arts.

From the appearance of birds in this island, of the interior and more northerly regions of the world, we judge of the severity of the winter, and intenseness of the frost. When the swans and snowflecks abound in the north of Scotland, they are deemed the infallible predictors of a great storm. The woodcock too, and fieldfare, are the regular harbingers of winter; whereas the cuckoo and the rail never fail to announce the approach of summer.

From their food, their manner of life, and their locomotive powers, birds seem destined to become inhabitants of every part of the globe. The cold and barren regions of the north, and the sultry deserts of the warmer latitudes, have equally a share in supporting the feathered tribes; and in some instances, these distant climes become alternately the residence of the same bird at different seasons of the year. Some dwell with man, and seem proud of becoming tenants under the same roof with their superiors, as the swallow, the jackdaw,

jackdaw, and the sparrow. The rapacious birds, of a more shy and independent spirit, are happy in being far from the haunts of men; therefore choose their residence in high rocks; others are of an alpine nature, inhabiting the lofty mountains, as the snowfleck and ring-ouzel. The bustard and the grouse prefer the extensive fields: the whole order of passeres delight in thick groves, which they enliven by their melodious strains. A numerous class of fowls also inhabits the waters; that element seems more congenial to the feathered race than to quadrupeds; the latter, a very few only excepted, universally avoid it, and are never seen to swim, unless when compelled by want or fear: on the contrary, perhaps the greater part of birds prefer the sea, only leaving it to obey some of the most powerful instincts of their nature; to lay their eggs, or to hatch their young. Hence only three or four quadrupeds are found with palmated feet; whereas we can reckon three hundred different birds provided with these instruments of swimming.

The various regions which birds inhabit, subject them to the different extremes of cold and heat; and very remarkable effects are produced on their external characters by both. Almost all the birds of the warm climates dazzle the eye with their strong and vivid colours; in the temperate regions, their tints are more faint and shaded, and less distinguished, either by their brilliancy or variety. Of the various kinds which our country produces, few are remarkable for the richness or luxuriance of their plumage; and of these few, the common cock and peacock are natives of Asia: among our quadrupeds the same mediocrity of colouring is observable; while nature has adorned the animals of both classes throughout the warmer regions of America, Africa, and the Indies, with the utmost splendour and variety of dress: on them she seems to have exerted the whole powers of her pencil. It may be laid down, therefore, that heat exalts the colours of plumage, and

renders them at once more vivid and beautiful: and, on the contrary, that cold deprives birds of those ornaments, and diminishes the brightness of their colour. As you proceed northward, the changes are always from brown to white, and never from white to any other colour. White animals and white birds are always most abundant near the arctic regions. It has been observed by some writers, that all those tropical birds, the lustre of whose plumage is so dazzling, possess a harsh and discordant voice, without almost any inflexions: this, however, seems carried too far; for, though musical birds are more rare in the warm latitudes, yet their woods are not destitute of songsters, nor their thickets of harmony.

The male and female in most species of birds differ very considerably in colour; the former is generally arrayed in the more gaudy dress than his mate, and differs from her so much, that it is probable the greater part of ornithologists have been deceived by this circumstance, and have multiplied the number of their species, by describing them double. It is to be presumed also, that varieties of the same family have been arranged as distinct species. The colour of birds, from a variety of causes, is changeable, and ought on that account to be seldom admitted as a characteristic mark of the distinct species. It is found, that the colour of all birds is influenced, in some degree, by age: in some, it varies according to the season; and in many more, according to the climate. At an advanced period of life, it has been alleged that the females of some genera apparently changed their sex, and assumed a plumage characteristic of the male. Something indeed analogous to this is discernible among the human species, in those copious beards that are seen on some old women after the period of fecundity. The snowfleck is an example of the influence of season upon colour: and those numberless birds of the arctic regions perfectly white, among which no such whiteness prevails
after

after their appearance in more temperate climes, serve to illustrate the powerful effects of climate, with regard to this particular.

From the flight and plumage of birds, we next proceed to examine their migrations from one country to another at different seasons of the year. There is no circumstance in their history which has more engaged the attention of naturalists than this; and there is, perhaps, none in which they have been less successful. In order to guide us through this dark research, we shall divide birds into such as are stationary, migratory, passengers, or wanderers. The first class comprehends a great number of our land birds; who, though they have so much to fear from man, and from each other, are seldom scared away from their accustomed haunts, although they are perfectly fitted for a wandering life; and though, by the ease and rapidity with which they can change their place, they are enabled to gratify their desires, however distant the object; yet a great number remain contented in the districts where they were bred, and seem to confine the gratification of their appetites greatly within the limits of their endowments. The eagle, the crow, the rook, and the sparrow, if undisturbed, never leave their native haunts: the blackbird still frequents its wonted hedge; and the red-breast, tho' seemingly mild, claims a certain district, from which he seldom moves, but expels from his territory all that are inferior in strength or courage, without distinction and without pity.

The powerful calls of nature, however, drive many birds annually from their native country in quest of food, of a warmer climate, or of a secure asylum, while employed in hatching and rearing their young. It was formerly believed, that the changes of heat and cold were the causes of the migrations of birds; it is more probable, however, that those daring and adventurous journeys which might even intimidate human perseverance, are occasioned by a scarcity of food, or by the
want

want of a secure asylum, during incubation, from the persecution of man. In general, our summer birds of the migratory kind come from the south; while those that remain with us during the winter months can almost be traced to the colder regions of Norwegian, Swedish, and Russian, Lapland. We are informed by Linnæus, that Lapland abounds, during summer, with enormous quantities of insects: and this is more or less the case with all the north of Europe. The insectivorous birds, therefore, such as the cuckoo, goat-sucker, and all the tribe of swallows, during the warm months, are there abundantly supplied; but, on the close of that season, when their favourite food begins to fail, they regularly depart for the milder climes of the south. Among the quails and the storks, this seems a preconcerted undertaking. They assemble together for some days before their departure; take different short flights, as if to train their young for the journey; and, by an odd kind of chattering, seem to debate upon the plan of their route. When these preliminaries are settled, they all take their flight in a body, that they may more easily oppose their enemies; they often appear in such numbers, that to the mariners at sea, they frequently seem like a cloud that rests upon the horizon. The boldest, strongest, and by far the greatest number, probably make good their intention; but many there are, who, not apprised of their own want of strength for the arduous undertaking, grow weary in the way, and, quite spent by the fatigues of their flight, drop down into the sea, or fall upon the decks of ships, where they become equally a prey, to the sailors or the waves. The summer birds of our country are the different species of swallows, the rail, lapwing, goat-sucker, ring-ouzel, and green plover. It is far from being exactly ascertained where each of these genera retires during winter; but it is probable the greater part resort to Africa, or to the more southern latitudes of Europe.

With

With regard to the winter birds, which migrate from us in summer, the most remarkable are the woodcock, the fieldfare, the red-wing, and the snowfleck. Of the first genus, the far greater part seems to make an annual voyage to Britain and Ireland from America. On the western shores of these islands, they are far more numerous than on the eastern; and, on the west of Ireland; they are in the proportion of ten to one that is to be found on the coast of Britain. After their long flight across the Atlantic, they are so much exhausted, that they are frequently caught with the hand on their first arrival. In farther confirmation of this opinion, woodcocks are known to breed in great numbers in Canada and Cape Breton, during summer; they leave both countries in the month of September, and return again in spring, nearly at the period they are found to desert Britain. To this we may add the observations of sailors, who have actually seen them at sea passing from the west, towards land on the coast of England, during the fall. It is not improbable that some of the woodcocks on the east coast may come from the north of Europe. They breed in Norway and Russia, and no doubt may migrate to these shores during winter: all the rest of our winter birds, we know, are natives of these countries: the woodcock alone is from the west, and its migrations have this farther peculiarity, of being solitary, and not in flocks, like the storks and swallows.

Among the winter birds of Britain, we must also rank the vast quantity of water fowl that frequents our shores: of these, it is surprising how few are known to breed here. The cause that principally urges them to their long journies into the northern regions, seems to be not merely the want of food in this country, but the desire of a secure retreat. Our island is too populous for birds so shy and timid as the greatest number of these are. When great part of the country was a mere waste, an uncultivated tract of woods or fens, many species

cies of birds which now migrate probably remained with us in security throughout the year. The great heron, and the crane, that have now forsaken this country, are said to have bred familiarly in our marshes, and by their numbers peopled our fens. Their nests, like those of most cloven-footed water fowl, were built on the ground, and exposed to every invader: as rural economy increased, these animals were more and more disturbed by the encroachments of the husbandman; till, after a long series of alarms, they have been obliged to seek, during summer, some lonely habitation, at a greater distance from their tyrants and destroyers.

Of the numerous species of the duck kind, we know of no more than five that breed here; the tame swan and goose, the sheldrake, the eider duck, and a small number of the wild ducks. The rest contribute in forming that amazing multitude of water fowl, which annually migrate from the southern parts of Europe to the woods and lakes of the dreary regions of Lapland: there they perform the duties of incubation and nutrition in perfect security; and, from these vast and solitary retreats, they issue in September, and disperse over the whole of Europe. There are few of this numerous genus, who, in obedience to the first great dictate of nature, may not be traced flying to the arctic regions, a country of lakes, rivers, swamps, and mountains: there the thick and gloomy forests not only afford them shelter and security, but also, by keeping the ground moist and penetrable, afford the snipe, woodcock, and other slender-billed birds, the means of collecting their food; while the web-footed birds find abundance in the larvae of insects, which are there deposited in vast quantities on the waters. There the days are long; and the beautiful meteorous nights afford them every opportunity of collecting so minute a food, which is probably more grateful than any other, and which the all-bountiful Creator has spread for them so abundantly in the wilderness. It is therefore no longer a matter of
astonishment,

astonishment, that such vast numbers of fowl should descend from these regions on the approach of winter, which far exceed the army of Xerxes, and which Linnæus observed for eight whole days and nights, to cover the surface of the river Calix, as he proceeded along its banks.

These migrations generally commence in the middle of September, when they quit their retreats to disperse over Europe. The order of their flight is remarkable; they either follow each other in a long line, or march in an angular form, the two lines meeting each other at a sharp point. The bird which leads the van, cleaves the air, and facilitates the passage of those that follow: when fatigued in this laborious station, he falls back into one of the side files, and is replaced by another, who leads on the whole body in his place. With us they make their appearance about the beginning of October; circulate first round our shores; and, when the frost compels them, betake themselves to our lakes and rivers. There are some of the web-footed fowl of hardier constitutions than others; these endure the ordinary winters of the northern climate, but, when the cold reigns there with more than common rigour, they repair for shelter to these kingdoms. Hence the divers, the wild swan, the swallow-tailed sheldrake, are not constant visitors; their appearance is regulated by the severity of the winters in their native abodes.

That animals so dull and irrational should be able to accomplish such long journies, should know where to direct their course, or when to undertake it, has been a matter of just surprise. It is probable they are guided in this, as in every thing else, by the strong impulses of an instinct under which they seem wholly passive. Their accustomed food no sooner begins to fail, or the climate to be disagreeable, than they meditate a retreat to better accommodations. In migrating birds, the change of residence is a kind of a natural want, which manifests itself strongly, even when in a state of

captivity. At the two seasons of migration, the quail, although confined, discovers the utmost inquietude; leaves nothing unattempted to procure liberty: and the violence of its efforts to escape often occasions its death. Impelled then, by so powerful an instinct, it is probable that birds obey its call, without foreseeing the advantages to be gained by removal, or anticipating the dangers of encountering the winter in the same country. They seem not to have any recollection of those places where they spent former seasons: they cannot possibly see the countries where they are to take up their abode, from their immense distance, and the roundness of the globe: they appear to be guided by the climate, rather than the country; and, so soon as they find the former suited to their wants, they are determined in their choice of the latter. The variety of opinions which naturalists have adopted concerning the departure and winter residence of our summer birds, fully evinces the obscurity of this part of their history. It is universally agreed, that the swallows in every part of Europe regularly disappear before the commencement of winter; and the most general and probable opinion is, that they remove beyond the Mediterranean to the warmer climate of Africa, to spend the winter in a country where they find a continuance of their natural food, and a temperature of air suited to their constitutions. In confirmation of this opinion, Mr. Adanson asserts, that during his long residence at Senegal, he constantly observed the swallows arrive there about the same time that they leave Europe. They have been frequently seen by sailors alighting on the rigging of ships, to rest themselves during their long passage from the one continent to the other. They are observed, too, like the quails and storks, to collect together in large flocks for some days before their departure; after which, they regularly disappear.

While the annual migration of the house-swallow seemed thus ascertained by facts, observations, and ana-

logy, another opinion has been formed, and with some appearance of evidence, that they pass the winter in a dormant state, in rocks, banks, and even in lakes, at the bottom of the water. This notion has lately been supported by authors of credit and respectability: some northern naturalists positively assert, from their own knowledge, that they have been dragged in nets from the bottom of lakes in a torpid state. Mr. Collinson has given the evidence of three gentlemen, eye-witnesses to numbers of sand martins being drawn out of a cliff on the Rhine: and the Hon. Daines Barrington, in his treatise on the migration of birds, asserts, that they do not fly over any large surface of water, but reside under it all winter in a state of hybernation. Several of our countrymen have given credit to the submersion of swallows: a German author, Klein, patronises the doctrine strongly, and gives the following account of their retreat, which he received from his countrymen. They assert, that the swallows assemble in numbers, on a reed, till, broken by their weight, it sinks with them to the bottom; and, as a prelude to their immersion, they sing a dirge of a quarter of an hour's length: that others would unite in laying hold of a straw with their bills, and thus plunge down in social compact into their subaqueous retreat; others again would form a large mass, by clinging together with their feet, and thus commit themselves to the deep. It is related by Olaus Magnus, archbishop of Upsal, that, when the fishermen discover such masses, by thawing the birds at a fire, they bring them to life; but, owing to a premature and forced revival, they continue but a short time to enjoy it. It would be offering an insult to the reader's understanding, to detain him with a particular confutation of opinions, the bare mention of which is sufficient to give him a proper idea of their validity. From some experiments made by M. Buffon, it appears, that the house-swallow, at least, is incapable of subsisting in a benumbed or torpid state. Those which

he placed in an ice-house uniformly perished, and gave no symptoms of revival on the application of heat. That naturalist, however, supposes that there may be some other species of swallow capable of such a state of hybernation: the celebrated anatomist Mr. John Hunter asserts, that in swallows the organs of respiration are very differently formed from those of the animals that sleep during winter; and he justly condemns the opinion of any terrestrial animal being able to support life for a length of time under water. Altho' there are abundance of lakes in Britain, yet there is no well-attested instance of swallows in a state of torpor and immersion: till such is found, we are surely excuseable in suspending our belief. What may have given rise to the above opinion is, that there remain annually some birds of later flights, who, unable to bear the fatigues of so long a voyage, are found destroyed by the rigours of winter. If their nests have, by any accident, been demolished, they are known to lay a second and sometimes a third time; not being able to carry off, at the usual time, this tender offspring, rather than abandon them, they prefer suffering with them the inclemency of the season, and certain death.

Besides those birds that remain stationary in the country during the whole year, and those that regularly migrate at particular seasons, there are some that may properly be stiled *passengers*. By this title is understood such as are found in a particular country only for a short time, as they pass from their summer to their winter residence. In North Britain, the king's fisher, and Bohemian chatterer, come under this description. A fourth class of birds have been denominated *wanderers*, from their passing alternately from one part of the same country to another, as induced by the weather. The curlew passes the winter in the vicinity of the sea; and in spring repairs regularly to the hilly country, where it passes the summer in incubation, and rearing its young. At the end of summer, these

these birds are seen again repairing in groups of three or four families to their winter quarters upon the shores. Two or three species of gulls also leave the sea, and, on the approach of stormy weather, take up their abode in the lakes of the interior parts of the country. Those birds that are observed far from land, may also be termed wanderers; scarcely a ship crosses the Atlantic, in which the sailors do not see some of them perching upon the rigging; it is to be regretted that men of this profession seldom possess curiosity in a degree proportioned to their opportunity of gratifying it, otherwise the history of birds of passage might have derived much illustration from their discoveries.

In the migration of many birds, there are peculiarities worthy of our notice. Some emigrate from a country to which they never again return; and of this we have a remarkable instance in the magpie. It is not above seventy years since a single individual of that species was seen in Ireland. At that period, they seem to have made a partial migration from Scotland; and they are at present as numerous in the former as in the latter country. The same spirit of colonization has been remarked among the wood-larks; some districts of the country being now frequented by them, where they formerly never appeared. It is observable, that some migratory birds leave a country one year, in which they are stationary in another: thus the common wild-duck remains in Sweden during a temperate winter, but emigrates in a severe one. This arises from a very urgent motive, the want of food; and, from the same cause, it is probable, that the wild-goose, which in Sweden is only a summer bird, is stationary in the north of Scotland. The sky-lark is permanent the whole year in Scotland, although it is a bird of passage in Minorca: in England also, the snipe is migratory, but stationary in Scotland.

Some birds migrate in quest of a particular kind of crop. In Cuba, the rice-bird is found in prodigious numbers

numbers during the season of that crop: the rice is no sooner gathered there, than it removes to Carolina, and meets the harvest in that country, where it remains till the rice season is past. It is to be remarked also of this and several other species of birds, that the male and female separate during the time of migration. Of the rice-bird, we are informed, that it is only the females that migrate to Carolina. In Sweden, a species of duck also is found, of which the males leave the country at the time of incubation, and do not return till the pairing season. A farther peculiarity in some migratory birds, is their observing a different route, while going to winter quarters, from that by which they return. The only certain example of this is the pigeon of passage in North America. In its passage from Canada, where it breeds in summer, to Carolina, it perches upon the trees in Virginia during night. Many of the branches are found broken to the ground by the weight of the immense multitudes that perch upon them; a circumstance which marks their route to the people of the interior country, who support themselves by killing them. By this means their progress may be traced with great facility from morning till night, during their whole journey; but, in their return to Canada, in spring, their track is altogether unknown.

Of the FOOD, LONGEVITY, DISEASES, and FERTILITY, of BIRDS.

WHEN we compare birds with the four-footed animals, there are many circumstances with regard to their subsistence, in which they strikingly resemble each other: the different kinds of food destined to be the support of the various tribes of both classes of animated beings, points out a strong analogy between them, and impresses the mind with an idea of the uniformity of the general plan of nature. There are among birds, as among quadrupeds, some that are carnivorous; and others,

others, whose food consists of fruits, grain, insects, or vegetables. The same physical cause which produces in some quadrupeds the necessity of devouring flesh, and other strong nutritive food, subsists also among birds. The carnivorous tribes in both have but one stomach; and the whole of their intestines are formed on a smaller scale than in those whose nourishment is grain or fruit. The crop in granivorous birds, and the paunch which corresponds to it in ruminating animals, are generally wanting in the rapacious kinds: by the largeness of this instrument of digestion, the former are capable of swallowing a much greater quantity of food, and can thus compensate for the plainness and simplicity of its quality.

The disposition and habits of all animals are strongly influenced by their manner of subsisting, and the nature of their food: among birds, there is observable the same variety as in quadrupeds; for in both, the causes of it are similar. The noble and generous eagle ranks among the former, as the lion among the latter: while the cruel and insatiable vulture seems to correspond with the tyger in savage rapacity. The kites, the buzzards, and the ravens, are the hyænas, wolves, and jackals, of birds; while the peacocks, turkeys, and all the gallinaceous tribes, represent the oxen, sheep, goats, and other ruminating quadrupeds: the manners of the latter are more mild and gentle than those of the rapacious kinds, and their flesh more salubrious and palatable. It appears, however, that the food of birds is, upon the whole, more various than that of quadrupeds; and that each species is less confined in its choice. Nature seems to have consigned to them for food, every animal, and every vegetable; and, among the former are comprehended a great variety of insects and reptiles, which quadrupeds generally disdain. As their sense of taste is far from being delicate, they frequently supply the deficiency of one kind of food by another; the hen and the turkey almost indiscriminately devour

devour flesh and grain. Their organs of taste are cartilaginous, and possess hardly any sensibility; their food is swallowed without mastication. From these circumstances, it sometimes happens, that, instead of nourishment, they devour poison. Hence the attempts of Frisch, and some naturalists, to arrange birds according to the nature of their food, have proved equally unsuccessful and injudicious; never can we ascertain the nature of any animal by a single habit alone; the more numerous the characters that are selected for its discrimination, the less imperfection will be found in its arrangement. As birds want the power of masticating their food, the formation of the stomach of the granivorous orders is admirably contrived to supply that deficiency. That office, which in quadrupeds is performed by the teeth, is in them transferred to the gizzard; which, by its strong muscular texture, is capable of being so forcibly contracted as completely to grind the hardest grain. This power of the gizzard is augmented by means of small pebbles which the bird swallows along with its food: when aided by these, the hardest of substances, even metals themselves, are corroded, and unable to resist its force. Pieces of coin have been introduced into the stomach of birds; and it has been uniformly found that their weight is considerably diminished, after being exposed to the violent trituration which they produce.

As birds are destined to move through the light medium of the air, they are far inferior both in weight and magnitude to the quadrupeds; the largest bird, the ostrich, bears no proportion to the elephant; nor does the humming bird, which nature has placed at the other extremity of this class, nearly approach to the size of a mouse. Nature, as she approaches near the confines of each class, confers more and more of the properties of the adjoining one on each species, till at last they so nearly approximate that she seems doubtful in her operations. The ostrich, placed at the extre-

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mity of the birds, seems in many respects nearly allied to a superior order: seemingly covered with hair, and incapable of flight, he makes near approaches to the race of quadrupeds; while the small humming bird, of the size of an humble bee, and sucking like it the nectaria of flowers, seems to be degraded nearly to the rank of an insect.

From the small size and slender conformation of birds we might be led to suppose, that the duration of their life would prove but short; the reverse, however, of this is the case: their longevity far exceeds that of quadrupeds, and even of man himself; and it seems neither to observe the same proportions, nor to be guided by the same rules. In these animals, the duration of life bears a certain proportion to the period at which they arrive at their full growth and maturity; nor are they capable of procreation till their size is nearly completed. In birds, the growth is more quick, and the period of procreation much earlier; many of them run as soon as they are excluded from the shell, and fly at the end of four or five weeks: a cock is capable of procreation at six months, and arrives at maturity in a year: if then the duration of human life, and that of quadrupeds, is only six or seven times longer than the period at which they arrive at maturity, a cock should live only six or seven years; his longevity, however, is far greater, some being known to live upwards of twenty years. A linnet has been known to live fourteen years; bulfinches twenty, parrots are said to live forty years; geese four-score: of swans, eagles, and ravens, there are various reports; some have asserted that they lived one hundred years, others double, and even three times that period; but of this there are few well-attested examples.

The longevity of birds, M. Buffon imputes to the texture of their bones; the hardness and solidity of which, he assigns as the general cause of death in all animals: those of birds, being lighter and more porous

in their conformation, present fewer obstacles to the vital functions; and nature, thus finding more room for the functions of life, carries it on to a more distant period. The less solid the bones are, the more distant, he alleges, will be the period of death; hence a greater number of women than men arrive at extreme old age. From the extraordinary longevity of birds, it is probable they are subject to few diseases: their annual molting, if it can be considered as a disease, is perhaps the only one to which they are universally liable. As quadrupeds cast their hair, so all birds, every year, obtain a new covering of feathers. This is what is termed their molting: during its continuance, they always appear sickly and disordered; the boldest lose their courage; none produce young, and many die under this severe operation of nature. No feeding can maintain their strength, or preserve their powers of reproduction. A hen, however plentifully fed, will then cease to lay; the nourishment which formerly went to the production of young, is now consumed and absorbed, in administering a supply to the growing plumage.

The molting of birds, even when left to the operation of nature, is a severe malady; its fatal effects, however, have been greatly increased by the interference of man, in endeavouring to bestow artificial accomplishments on those birds which he reduces to captivity, for the sake of the beauty of their colours, or the melody of their song. The bird-catchers in the vicinity of London, whose employment consists chiefly in gratifying the whimsical and capricious, have invented a method of accelerating the season of molting, by which it is pretended that birds are improved both in their song and beauty. To effect this, they shut them up in a dark cage, closely wrapt up with woollen cloth, allowing their dung to remain and increase the heat of the cage: in this state of confinement, which continues for a month, they are only now and then supplied with water, the putrid air, and the fever which

which it occasions, depriving them of all appetite for food. By this violent operation, which is termed *stopping*, an artificial and premature molt is produced, at the expence of the lives of many of the ill-fated creatures who are subjected to so unnatural a regimen. The price of a stopped bird rises in proportion to the danger attending it; for it is pretended that its note is not only louder and more piercing than that of a wild one, but that its plumage is also more vivid and beautiful: in short, that there is as much difference between a wild and a stopped bird, as between a horse kept in body-clothes and one at grass.

The manner in which nature performs this operation, as it is slower in its progress, so it is less frequently attended by the same fatal consequences. When the feathers of birds have attained their full size, the pen part nearest the animal grows harder, and thicker in its sides, but shrinks in its diameter; in consequence of the first of these processes, it draws gradually less nourishment from the body of the animal; and, by its decrease in size, it grows more loose in the socket, till at length it falls. "In the mean time, the rudiments of an insipient quill are forming below: the skin is formed into a little bag, which is fed from the body by a small vein and artery, and which every day increases in size, till it is protruded." While the one end vegetates into the beard or vane of the feather, that part attached to skin is still soft, and receives a constant supply of nourishment, which is diffused through the body of the quill by the artery and vein. When, however, the quill is come to its full growth, and requires no farther nourishment, the vein and artery become gradually less, till at last the small opening by which they communicated with the quill is stopped, and the circulation ceases. The quill, after it is thus deprived of new supplies, continues for some months in the socket, till at last it shrinks, and makes room for another repetition of the same process of nature. The molting season

commences at the end of summer, and the bird continues to struggle under the malady for a considerable part of the winter; thus, by the wise appointment of nature, the appetite of the animal is least craving while its provisions continue to be most scanty. It is not till the return of spring, when the feathers have attained their full growth, that the abundance of food, aided by the mildness of the season, restore it to its full vigour. It is then, when every vegetable springs afresh, that insects are awakened from their torpid state; and that nature, teeming with an increase of life, seems disposed to continue and transfuse it, by the re-production of every species of her offspring.

“ Among the feathered race, accordingly, the return of spring is the beginning of love. Those vital spirits, which seemed locked up during winter, begin then to expand; vegetables and insects supply abundance of food; and the bird, having more than sufficient for its own nourishment, is impelled to transfuse life, as well as maintain it. The return of the sexual passion among birds is announced by the frequency, loudness, and variety, of their notes: hence M. Buffon concludes, that there is in these animals a strong connection between the organs of generation and those of the voice; and that the delightful harmony of the grove, so much admired by man, is the natural expression of their loves. The language of the male, in this season of enjoyment, is most loud and copious; to his call of allurement the female expresses her assent in more feeble and interrupted notes. In quadrupeds the sexual appetite is strong, but the desires arising from it are as fleeting as they are impetuous: while that passion in birds is distinguished by tenderness, attachment, and constancy. Except the gallinaceous and a few other tribes, birds are all monogamous; and, for the season at least, the compact is observed with unbroken fidelity. Among quadrupeds, there are but few instances of conjugal fidelity, and still fewer of parental concern

concern in the males for their progeny ; whereas, among birds, examples of the contrary are rare. Nothing can exceed the affection and assiduity of the monogamous birds, but their mutual tenderness and solicitude for the fruits of their love. The female no sooner begins the construction of her nest, than she is assisted by her mate : their mutual labour produces a mutual attachment, which is strengthened and confirmed by succeeding toils and multiplied cares. During the whole period of incubation, the male carries food for his female, or soothes her by his song : sometimes he even supplies her place in her absence, or joins her in the nest, to increase the heat, and share the fatigues of her situation. But the pleasures of love appear dull in their effects, when compared with the force of those attachments which commence after the exclusion of the young. Their birth seems a new source of transport, and a fresh bond of union ; their maintenance and protection is another employment requiring the joint efforts of both parents. Thus far the manners of birds represents what takes place in every worthy family ; mutual love and parental affection ; and these slender beings, whom nature seems to have produced in sportive mood, may, nevertheless, be regarded as a sober and virtuous race, from whom we may derive moral instruction, and an useful example. This conjugal fidelity, so remarkable among birds, seem to arise from the necessity of both male and female co-operating in building their nest ; and providing for their young. It is only found to prevail in the woods and fields, where nature is allowed to remain in unadulterated simplicity : wherever man interferes, he influences and changes the strongest propensities of their nature. The poultry in our yards, who are exempted from the labour of building a nest, and of providing for their security and sustenance, either indulge in promiscuous venery, or are distinguished by the slightness of their attachments, and the inconstancy of their love. The females among
them

them have the whole charge of rearing and protecting the young; an office for which they are well qualified by the tender sollicitude which they display, and that courage, bordering on fury, by which they are at that season animated.

In general, birds possess a much greater degree of fertility than quadrupeds. Weak and defenceless as they are, and surrounded by a thousand enemies, they are liable to so many accidents, that, without this wise provision of nature, the whole race must have inevitably been extinguished. Those birds also which are most useful, or easily destroyed, are always most distinguished by their fertility. While the eagle, and some of the rapacious birds, lay only from two to four eggs, the grouse, partridge, and other gallinaceous tribes, whose flesh is palatable, and who are therefore so often made the prey of man and their own species, lay from nine to eighteen. Thus, the rapacious animals are abridged by sterility; while those that are easily destroyed are as easily repaired; for, wherever nature has denied the power of resistance, she has compensated the want by the fertility attending procreation. The power of generation is greatly increased, and the period of fecundity prolonged, among the poultry kind, by domestication. Want, cold, labour, and inquietude, diminish in all animals both the effects and the power of procreation; they are constantly more productive in proportion as they are well fed, and regularly supplied with accommodation. Those who are left in freedom, who are continually exposed to scarcity of food, fear, and all the inconveniencies of an independent state, appear not to exert to their full extent their power of generation; they seem to husband its effects, and accommodate them to the exigencies of their condition. A bird, who has completed her usual number of eggs, immediately ceases to lay. All the rest of the season she employs in incubation, and rearing her young. If, however, by any accident, her nest is

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destroyed,

destroyed, she constructs a second, or even a third, and will lay as often. Duty seems here to controul passion, and attachment to gain the ascendant over love. The common hen, whose eggs are constantly carried away, does not begin to hatch till her power of procreation is exhausted; and, by laying upwards of an hundred eggs in a season, displays the great extent to which the fertility of birds may be carried. It is probable, that the fertility of all the different birds capable of domestication might be increased by that means. Our common poultry, in their wild state, are said not to be more prolific than the partridge or pheasant. The abundant nourishment with which we supply them, appears to be converted into the materials of fecundity, and to increase their power of propagation.

Of the NESTLING and INCUBATION of BIRDS.

AFTER fecundation, the female begins to lay; but it is only such eggs as have been impregnated by the male that are prolific; those that have been produced without previous connection with him are always addled by incubation: this is said to be almost uniformly the case with one of the two eggs laid by the female eagle. The ovation of birds has been considered as an important part of their history. Klein has published a work on this subject, in which he has delineated the eggs of one hundred and forty different species, coloured so exactly from nature, that they can hardly be distinguished. Sir Ashton Lever made the greatest collection of the eggs of birds that has been hitherto known.

The habit of incubation is common to all birds, except two species, the ostrich and cassowary, who deposit their eggs in the sand, where they are hatched by the heat of the sun. Before laying or incubation, all other birds are uniformly directed by instinct to the operation of nestling. Among the monogamous birds who build upon trees, this proves a laborious undertaking

taking, and is accomplished generally by the united endeavours of both sexes. The nidification of birds has been deservedly the subject of much admiration; among the different orders there is to be found almost every imaginable variety in the situation, structure, and materials of which they are composed. Such, however, is the uniformity with which instinct proceeds, that the same species, in all countries, build their nests not only of the same shape, but as far as possible with the same materials. In the red-breast, and some other birds where a small variation in their mode of architecture has been perceived, it has always been found to be the result of necessity. Where oak leaves are found in plenty, the former prefers them; if not, he supplies the want by moss and hair. In general, the structure of the nest is adapted to the number of eggs, the temperature of the climate, and the heat of the animal's body which is to occupy it. When the bird is of small size, and its eggs are numerous, the nest must be proportionably warm, that they may all equally partake of the vivifying heat. Hence the wren, and many of the smaller birds, construct their little edifices with great care, and with very warm materials; whereas the plover and the eagle, whose eggs are so few, that the body may easily be applied to them, build with no solicitude; some, in these circumstances, leave them upon the naked rocks. The climate has also its influence on the nestling of birds: many of those water-fowl, who, with us, construct their nests in so careless a manner, discover greater solicitude in the colder climes of the north, where they strip the down off their breasts to line their nests and protect their progeny.

The situation of the nests of birds seems to depend greatly upon their habits of life, the vicinity of food, and their security from the invasion of their enemies. Some build upon the ground, as the gallinaceous tribes and water fowl: others build under the ground, as the swallow and puffin; which last becomes the tenant of a
rabbit's

rabbit's hole. By far the greater number build in bushes, or on rocks : one species only, that of the water-hen, performs incubation on the surface of the waves, her nest being attached to a few reeds. The larger rapacious birds, who live in perpetual hostility with all nature around them, repair, at the breeding season, to the inaccessible rocks and precipices, where they have least to fear from man, and those numerous tribes of animals with whom they constantly live in hostility. In the thick and luxurious woods of the warmer climates, where birds have little to fear, but from the serpent or monkey tribes ; some build their nests pendulous from the extremity of the branch of a tree. There, where man is seldom their aggressor, they take no pains to conceal them from the eye ; their construction is beautiful, and their entrance curiously contrived below, to secure them against the more dangerous invasion of the serpent or monkey. But all those who live upon fruits and corn, and are too often unwelcome intruders upon the fruits of human industry, are chiefly solicitous, in constructing their nests, to conceal them from the eye of man. Informed by experience with how much severity he checks their encroachments, they seem, by their extreme precaution, to elude his observation, and to regard him as their most formidable enemy.

The nestling and ovation of the feathered race are no sooner completed, than they enter upon another process equally necessary to perpetuate their kind, but still more tedious and painful. Neither the nature nor extent of the instinct of brutes is fully understood ; this principle, however, during the incubation of birds, seems in some respects to approach, if not to surpass, the powers of reason. Nothing can exceed the patience of birds when hatching : during a period which continues from three to eight weeks, neither the approach of danger, nor the calls of hunger, can drive them from the nest. Before incubation is completed,

the female, however plump at the beginning, is generally emaciated to a skeleton. Among some tribes, the male and female sit alternately, the more equally to divide the tedious labour: among others, the male provides food for his mate while hatching, or alleviates her toils by his melody from a neighbouring bush; some join together in the arduous operation, and, by increasing the heat, endeavour to accelerate its progress. At times, however, the eggs acquire an heat that seems hurtful to infant life: on these occasions they are left to cool; and the hen, after a longer or shorter space, according to the weather, again resumes her occupation, with her former perseverance and pleasure.

Mr. Addison, when speaking of the instinct of birds, terms it an immediate direction of Providence, such an operation of the Supreme Being as that which determines all portions of matter to their proper centre of attraction. It is certain that they seem almost entirely passive under its influence. In obedience to its call, they fly from one appetite to another: and, whatever ingenuity they may seem to possess while acting under it, in every thing beyond its reach they display the utmost dullness or the greatest stupidity. "With how much seeming caution does an hen provide herself a nest in places unfrequented, and free from disturbance! When she has laid her eggs, so that she can cover them, what care does she take in turning them regularly, that every part may partake of the vital heat! When she leaves them to provide necessary sustenance, how punctually does she return before they have time to cool, and become incapable of producing an animal! When the birth approaches, with how much nicety and attention does she help the chick to break the prison: she covers it from the injuries of the weather; provides it with proper nourishment, and teaches it to help itself!" In all these particulars, her instinct guides her with the caution and exactness of human reason in its nicest and most delicate operations. Yet, with all these appearances

ances of sagacity, the hen, in other respects, discovers no glimmerings of thought, nor any shadow of ingenuity. She will please herself with a stone, or a piece of chalk, instead of an egg, and will try to hatch it in the same manner: she knows not the number she has laid; and allows them to be increased or diminished at pleasure: she cannot distinguish her own eggs from those of another; and she will rear a brood of ducks as carefully as chickens: when she beholds this supposititious offspring launch into the pool, she stands at the edge of the water, trembling between two contrary impulses of instinct; but obeys the more powerful call of nature, that of self-preservation.

When the young are produced, the next object of parental care is their protection and support; and, the spirit and industry they display at this period, demonstrate how amply nature has qualified them for both. The most timid and inactive become spirited and courageous in defence of their progeny: the rapacious kinds acquire more than usual ferocity. "They carry their prey, yet throbbing with life, to the nest, and early accustom their young to habits of cruelty and slaughter." Those of milder natures, equally occupied by the necessary concern of supporting their families, discontinue their singing at this season; every inferior amusement, at the commencement of this great æra of their happiness, is laid aside, when, proud of becoming parents, and rearing a progeny of their own, they seem transported with pleasure.

Of those birds who build on the ground, the greater part of the young are able to run as soon as they are excluded from the shell; all that is necessary for them, is shewing their food, and teaching the manner of collecting it. Those, however, who are hatched upon trees, remain in the nest so long as they continue in an unfledged state. During this period, both parents are commonly employed in providing them a regular supply: with which they are all fed in their turns, one

after another, that none may take away the nourishment from the rest. It is not till after their plumage is fully grown, and they are capable of avoiding danger by flight, that the young are led from the nest, and taught to provide for themselves. At first they make only short excursions, while the weather is fine, around the nest, or those places in its vicinity where food abounds. After they have been for some days taught to discover their food, and carry it away, and have at length become completely qualified to provide for themselves, the old ones lead them no longer back to the nest; but, conducting them to some field where their food is plenty, they forsake them for the last time; and their former intimate connection, being no longer necessary, is for ever broken off.

From the longevity of birds, and their fertility in production, we might imagine that they would soon overspread the face of the earth, and overpower the feebler tribes in the great commonwealth of nature. Their numbers, however, are abridged by a thousand accidents; and it is probable that a family seldom adds its whole increase to the general stock of inhabitants. Such only as are hatched early in the spring are strong and vigorous; while such as have been delayed till after the middle of summer are feeble and tender. Many of the latter are incapable to sustain the rigours of winter, and fall a sacrifice to cold and want, against which they are unable to provide. Birds, as if warned of this danger, endeavour to produce their young early in the spring; if, however, their labours have been obstructed by any accident, if their nests have been discovered and plundered, they still persevere in their endeavours to fulfil the purpose of nature, and they usher into life a feeble offspring, at a period too late to acquire that vigour necessary to overcome the severity of winter.

After the young of birds have come to that degree of maturity which renders them independent of parental assistance,

assistance, the different tribes differ remarkably in their appetite for society; some kinds are solitary, and others gregarious. Many birds who live in pairs only during the breeding season, assemble together in large flocks as soon as that period is past. This is remarkably the case with swans, geese, and ducks: the whole order of *passeres* also commonly collect into flocks during winter; and in these flocks, birds of different species are often united: they all, however, regularly disperse on the approach of spring, the pairing season. On the other hand, the herons, gannets, and some other tribes, live in a gregarious state during the breeding months, and afterwards spread over the country in a state of solitude and dispersion. Some are observed to breed and live the whole year in society, such as the pigeons, rooks, and starlings; while the rapacious live in continual solitude: the eagle, jealous of the rivalry of his own offspring, unmercifully expels them from that district which he has chosen for his residence, and seems equally deaf to the calls of pity or affection.

Of the general USES to which BIRDS are subservient in the ECONOMY of NATURE.

IN the history of birds, we must not overlook those important uses to which they are subservient in the economy of nature. The rapacious kinds evidently serve the important purpose of preserving the salubrity of the air, by devouring all sorts of carrion, every where scattered over the surface of the globe. The earth every where teems with living creatures, whose natural death, or accidental destruction, would communicate to the atmosphere a putrid and noxious influence, were the carcases allowed to dissolve and mingle with the soil, by the slow process of corruption. The order of *grallæ*, or waders, are evidently destined by nature to co-operate in the same necessary employment. They destroy toads, frogs, lizards, and serpents, animals noxious while alive, and whose bodies,
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when dead, more or less infect the air with putrid vapours. On this account, the inhabitants of Holland and of Egypt are greatly indebted to the labours of the stork: in the latter country, which abounds with every hideous reptile which a humid soil or sultry sun can quicken into life, this favourite bird lives, even in its wild state, protected by the laws of that kingdom.

The granivorous birds are also deemed of great utility in the system of nature; because they abridge the fertility of those plants which emit such immense quantities of seed as would soon overspread the earth; and which, if left unrestrained, would infallibly overpower the more useful vegetables. Many species are farther useful in transporting seeds from one country to another, and thus disseminating plants more universally over the surface of the globe. Some of the water fowl perform a similar service, by transporting the spawn of different kinds of fishes, and replenishing the waters where their inhabitants have been extirpated or diminished. The seeds of plants, and the spawn of fishes, are in many instances known to resist the digestion of animals, and to pass through their bodies unassimilated, and still in possession of their prolific qualities: water fowl also perform the same office in their element which the rapacious birds do in the air; they prevent the putrefactions of stagnated waters, and preserve their purity, by destroying vast numbers of aquatic animals with which they teem, whose bodies, by corruption, would render it pernicious. Thus, throughout the whole empire of nature, every province is subservient to the general welfare: vegetables, insects, and fishes, supply many animals, while the former are more universally disseminated by the latter; every order contributes to assist and nourish the adjoining one, or to check its exuberance. Thus a due balance and proportion is maintained throughout the whole; and no nation in the universal republic is allowed to pass its boundaries, or overpower its neighbours.

Besides

Besides the uses to which the feathered tribes are subservient in the general plan of nature, we may contemplate their connection with man, and observe how far they contribute to his pleasure or advantage. With regard to his support, their utility is momentous; for it is remarkable, that of the vast number of birds who inhabit the globe, it has never yet been discovered that a single one is of a poisonous nature. They differ, indeed, in being more or less salutary and palatable, as an article of diet; but none of them are pernicious: none of their eggs, in like manner, have been found of a noxious quality; a circumstance well known to seafaring people, who eat freely every species of egg, without finding any bad consequences ensue. Their eggs, however, as well as their flesh, vary considerably in taste; some are greatly preferable to others. The egg of those termed game, and of the different species of gallinaceous birds, are generally reckoned agreeable: of the caper-caillie, it is said, that its eggs are the most delicate hitherto known; those of the ptarmigan, lapwing, and bustard, are also coveted by many, who prefer them to the eggs of the domestic poultry.

As an article of diet, all the carnivorous birds are avoided; though by no means poisonous, their flesh is hard, tough, and often of a fetid smell. The piscivorous too, and especially those with sharp bills, are generally disliked; some of the young, indeed, are eaten with avidity, such as the marrot, puffin, and gannet. All the water fowl, even those with flat bills, are generally reckoned a heavy and rancid food: the goose and duck are probably the best, and these are much improved by being kept at a distance from water, and restricted from fish. The insectivorous birds, though not noxious, are generally likewise avoided as an article of food, from their impure manner of feeding: on the contrary, all the tribes of finches, and other small birds who feed upon grain or seeds, are much esteemed.

esteemed. The woodcock, snipe, and bittern, the whole tribe called mud-suckers, are accounted a great delicacy among the connoisseurs; by these, too, are approved the muir-cock, partridge, and caper-caillie: it remains doubtful, however, whether the food of any bird can justly be preferred to the common poultry.

The next article relating to the general history of birds, is their domestication. Although the flesh, eggs, and feathers, of birds are valuable articles in the commerce of life, yet very few of this numerous class of animals has been made subservient to economical uses by domestication. Shy, timid, or fierce, in their nature, they appear but little susceptible of attachment or obedience. Jealous as they are of liberty, and furnished with effectual means of escape, they fly the haunts of man, and by far the greater part continues in the primitive wildness of nature. Few, even of those we term domestic, discover that familiarity or affection that obtains among those quadrupeds who have given up independence for protection, and to whose constant ministry we are much indebted.

Of the first order of birds, the rapacious, not one species has ever been domesticated by man, except a few, for the purposes of falconry; and these are always taken, when young, from the nests of the wild ones; a proof that they do not thrive and propagate in their captivity. As their acquired habits are conferred upon them with great difficulty, so they are slight, and easily effaced: an hawk, when he gets at a certain distance from his keepers, seldom wishes to return. The numerous tribe of pies contains not one species that hath ever been reduced to a domestic state. Their food could not easily be procured in captivity; their manner of life is unfavourable to it, and their flesh is deemed impure as an article of food. The gallinaceous order contains several species which have with great advantage been made subservient to the purposes of domestic economy; viz. the peacock, the turkey, the barn-door

door fowl, and guinea-hen: the last of these, however, has but lately been imported into Britain; the common poultry are originally from Asia, but were early introduced into Europe.

Of the columbine tribe, one species only has been tamed, that of the common pigeon, which is well known, and in some places a very lucrative object of commerce. None of the passerine or struthious orders have yet been domesticated, though many of the former are reckoned delicate food. Four species of the duck kind have been brought from their wild state to the service of man; the swan, the goose, the guinea duck, and the wild duck. The grallæ, or waders, are deemed such excellent food, as to provoke the appetite of the pampered epicure; such as the woodcock, snipe, curlew, stork, crane, and some others; yet not one of all this numerous class has ever been brought into a domestic situation. This enumeration suggests a remarkable fact, that of upwards of fifteen hundred different species of birds, which are already known and described, only nine have been rendered serviceable to the human race by domestication.

It is to be regretted, that the acquaintance of man with the feathered race is so limited, as many species may no doubt be found, which, by domestication, might add to his stock of subsistence, increase his industry, and multiply his amusements. We have reason to believe, that even the birds of the warmer climates might, if otherwise proper for the purpose, be successfully domesticated, even in these northerly countries. Many of those which we already have, are natives of the intratropical parts of the earth. The common turkey and guinea-hen were originally inhabitants of Africa, and probably of the burning regions under the line. The sheldrake, a bird rather larger in size than our common duck, is one of those which, it is presumed, might be rendered useful by domestication. It is tamed with facility; and, though it lives on

the shore, it has been found by experience, that it will thrive and breed in ponds. It is more beautiful in plumage than the common duck, and is equally proper for the uses of the table. The domestication of the Canadian goose has also been attempted with success, at the seat of a nobleman in Scotland. The eider duck, a bird rather smaller than the goose, might also be tamed, especially as its down is considered as an article of value.

From the weight and size of the bustard, in which it is superior to the turkey, that bird seems highly useful for the table; and, from the nature of its food, which is grain, it seems perfectly fitted for domestication. Its eggs are said to be preferable to those of all other birds, and its flesh is nutritive: from its weight it is scarcely capable of raising itself from the ground; a circumstance which renders it perhaps too easy a prey to the sportsman, but which seems favourable to its domestication. Similar to the bustard, in its manner of life, is the field-duck, a native of France, a bird which might be brought into this country, and tamed with great facility. The American pigeon, might with propriety be introduced into this country, from Canada, where it abounds, and constitutes a great part of the food of the inhabitants.

Besides the birds fitted for domestication, there are others which might be imported to this island from abroad, and might prosper in a wild state. The hazel hen, so much esteemed in Germany both for sport and the table, the francolin of Italy, and the red-legged partridge of Spain, might all easily be introduced into Britain, to the great increase of our game. The last of these is domesticated at Cadiz, and is found in its wild state in plenty throughout Spain and France. It might be transported to Britain in either state, perhaps with equal or greater success than the golden and China pheasants, which some gentlemen have so earnestly endeavoured

endeavoured to propagate upon their estates. The crested turkey abounds in its wild state in the inland parts of New England. The great quantities of food which the inhabitants obtain by killing this bird, clearly point out the advantages to be derived from its domestication, and the propriety of importing it into this country. But the greatest desideratum in the importation of birds, seems to be that of the capercaillie. This bird is indogenous in Scotland, and was formerly spread over the whole country; but, from the facility with which it is killed, it became an easy prey to the sportsman, and is now so nearly extirpated from the island, that, except in some remote districts of the Highlands, it is no where to be found. The black-cock or heath-fowl, too, is fast diminishing in number; its extermination appears to be at no very remote period, unless it is imported and preserved on those estates where it formerly abounded.

OF RAPACIOUS BIRDS.

THROUGH each class of animated beings, nature observes a remarkable uniformity in her productions: a great proportion of quadrupeds live on the vegetable productions of the earth, while others are supported by devouring the flesh of each other. The same general features are found to characterize the birds; some of them live upon grain, seeds, or grass; and others upon flesh, destroying every inferior animal, even of their own class, that is not endowed with force or swiftness to elude their rapacity. Were all animals so constituted that they could only subsist on one kind of food, the stock, however plentiful, could not maintain the same number as are supported by the present economy of nature, in which the rapacious are supplied by the flesh of such of the granivorous as fall by accident, or by the course of nature. By thus varying the appetites of animals, their numbers are multiplied, and

60 N A T U R A L H I S T O R Y

the general stock of inhabitants is increased, whether of the air, the earth, or the sea.

The number of birds, however, who live by making depredations upon their own kind, is proportionably much smaller than that of the carnivorous quadrupeds. In the former class, the rapacious constitute hardly a fifteenth part of the whole; whereas, in the latter, they amount to more than a third. As the number and strength of the predatory birds are smaller than those of the carnivorous quadrupeds, so the devastations committed by them on land are far less considerable. On the other hand, the tyranny of birds upon the water seems more extensive and inveterate: while the otter and beaver, with a few others, are the only quadrupeds that live upon fish, there are vast tribes of birds who have no other subsistence. Thus the general plan of nature is followed out; life is multiplied, and the surplus of one order of animals is destined to increase and support another.

The rapacious birds are easily distinguished from the other orders, by their external form, as well as their habits of life. Their instinctive passion for animal food could not have been gratified, had not nature endowed them with powers fitted to obtain it. As their subsistence cannot be obtained without swiftness, courage, and strength, they are, in general, remarkably superior in these qualities to all other animals of the feathered tribe. The head is large, the sight astonishingly quick in those that ravage by day; and such as plunder in the night, from the extreme sensibility of their organs of vision, see their prey in darkness with much precision. From the strength of their muscles, their wings, tho' large, are moved with a rapidity and force that enables them to surpass in velocity almost every bird of their own size. They are principally distinguished by their beak, which is strong and crooked, with a notch at the point, for the purpose of tearing their prey; by their legs, which are short, strong, and muscular; by four
toes

toes on each foot, all armed with sharp hooked talons, which render it impossible for their booty to escape, when once it is seized. Their internal conformation is no less adapted to the warlike and predatory life which they lead: their intestines are small in proportion to the size of their body, and they are capable of enduring want for several days together. Their stomach is less complicated than that of the granivorous tribes: their food being succulent and nourishing, a shorter process is, it seems, sufficient for assimilating it: hence the simplicity of structure in their organs of digestion, and the smallness of their size. Thus armed by nature, they issue forth from the forests, the rocky mountains, and other solitary places, where they commonly reside, and spread terror and devastation wherever they appear. They generally build their nests upon the cliff of some inaccessible rock, or upon the tallest trees of the forest. When, impelled by hunger or their native ferocity, they appear in the plain, it is only for the purposes of depredation: all the smaller birds fly at their approach, or endeavour, by concealing themselves, to elude their search: some of them, when closely pursued, are forced to seek protection with man, and to surrender themselves to him as the more merciful enemy; a mark of confidence, which might entitle them to his compassion and assistance, even in a less perilous situation.

The ferocity of the rapacious birds not only renders them destructive to their own species, and almost untameable by man, but even extends to their young, and deprives them, in a great measure, of parental affection. Many of them unnaturally expel their offspring from the nest, at a time when they are still dependent on their assistance, and incapable of procuring their own food. This cruelty to their young arises from the necessity of providing for their own subsistence. All birds that are obliged by the conformation of their stomach and intestines to feed upon flesh, and support
them,

themselves by prey, must necessarily acquire habits of cruelty, from the constant use of those arms which nature has conferred upon them, even although they had been originally mild. As it is only by destroying others that they can supply themselves, their continual combats must enure them to that fierceness and irascibility which distinguish their manners, and overpower every milder instinct, and even their affection for their young. It is with little pity or attention, that the bird of prey listens to the cries of her brood, which are more famished in proportion as they increase in size. Should she fail of success in the chase, or should her prey become scarce, she beats them, expels them from her nest, and sometimes destroys them in those transports of fury, of which her own pressing wants, and her misery, is the cause.

The effects of so much fierceness, natural and acquired, would prove fatal to all the smaller birds, had not nature provided, that the rapacious kind should generally pursue such as approach nearest to their own size. The eagle does not indulge in indiscriminate rapine in the grove, but singles out the grouse or pheasants from the inferior birds, which he regards as unequal to his support, or below the dignity of his resentment. The smaller birds of this order direct their attacks against the linnet, the thrush, or the sparrow, who, by the suddenness of their evolutions, and agility of flight, seem possessed of adequate means of escape. Did the eagle, to its own swiftness, add the versatility of the sparrow, all the inferior tribes must unavoidably have been destroyed, and disappear from the face of the earth.

The tyranny of the rapacious birds is still farther restrained by their infecundity; the greater part of them laying from four to five eggs, and some only two. The smallest of them are generally most productive; but the fertility even of these is far inferior to that of the numerous tribes of which they are the destroyers. The pigeon, which lays the fewest eggs of all the gra-

nivorous birds, by the frequency of its breeding, far exceeds the fertility of any of the rapacious kinds. Wherever courage or strength is wanting in any animal, and life on that account is easily destroyed, nature kindly compensates for these defects, and provides for the preservation of the species, by increasing its power of reproduction.

The fierceness of this order of birds, and their difficulty of procuring food, render them unsociable. The rapacious birds, like the carnivorous quadrupeds, never assemble in flocks; at the breeding season, the male and female are found together, in obedience to the call of that appetite, which controuls their ferocity, and which in force appears inferior only to the necessity of self-preservation. Although one pair of eagles may subsist together, and two individuals assist each other in the hostilities which they commit, a larger number in society could not find a sufficiency of food: hence the young, as soon as they are capable of flight, are driven from the tracks occupied by their parents, and are forced, by the same necessity which urged their progenitors, to lead a wandering life, and devour in solitude the fruits of their plunder. The vultures alone form an exception to this remark; as they feed upon large carcases which are found in plenty in the countries which they inhabit, they sometimes crowd in vast numbers to glut themselves with the same carrion.

In all birds, except the rapacious, the males are superior in strength and size to the females: among them, however, the male is generally one-third less in bulk; a circumstance from which falconers have termed him the tiercel. The female no less excels her mate in beauty of plumage, courage, and generosity, than in point of size. Naturalists have in vain attempted to account for this disparity. The same appearance among the insects and fishes, they have imputed to the immense quantities of larvæ and spawn which the females in these classes produce, and which must require a proportionably

proportionably larger bulk to contain them. No such reasoning will apply to the rapacious birds, who, as we have already observed, are the least fruitful of all feathered tribes. Some have supposed, that as the female has chiefly the charge of maintaining the young, her superior size and courage were the endowments by which nature had enabled her to discharge that laborious and difficult task.

The flesh of all birds of the rapacious nature, is reckoned impure; it is lean, tough, and ill-tasted; its flavour commonly resembles that of the animals which they devour. That of the vultures has a foetid and abominable smell, which all the endeavours of the wretched savages, who sometimes are forced to eat them, is unable to remove. The stench is unconquerable, and seems to defy all the efforts of their invention: in vain the intrails are taken away, washing is attempted, or spices applied; the nauseous effluvia still continue to repel their avidity.

In the order of rapacious birds, Linnæus enumerates four genera; that of the vulture, the falcon, the owl, and the shrike. The circumstances of age, size, colour, and climate prove abundant sources of mistakes in arranging all birds: with regard to the rapacious kind, naturalists are not agreed in the number of genera, much less of the different species and varieties, which this order contains. The genus of vultures may easily be distinguished, from their head and neck, which are covered with short down; their legs and feet are covered with scales; their claws are large, broad, and hooked; and the inside of their wings is covered with down.

VULTUR, of the Order of ACCIPITRES.

THE distinguishing characters of this genus are as follow: the beak is straight, and crooked at the point; the head has no feathers, being bald, or at least only covered with a naked skin; the tongue is bifid, and the neck retractile. Their natural habits are these: they are very voracious; prefer dead carcases, even though putrid, and will not attack living animals, unless urged by famine; fly slowly, except when risen to a great height; assemble in flocks; and are endowed with a most acute smell.

The vulture is placed in the first rank among the rapacious birds, on account of his superior strength and size; for in courage and generosity he is far inferior to the eagle. Though he seems most nearly allied to the latter, he may be distinguished from him at a considerable distance, either on the ground or on the wing. His posture, while standing, is not so stately and erect as that of the eagle, but inclines strongly forward, and seems to indicate the baseness of his disposition. His flight, too, is singularly dull and heavy; it is with great difficulty, and not till after repeated efforts, that he can raise himself from the earth. The vulture is as destitute of courage as activity: while the eagle opposes himself singly to his foe, and seems as eager for victory as for spoil; this sluggish and cowardly creature never attacks a living animal, if his gluttony can be satiated with the carcases of the dead. The vulture alone, of all the predatory birds, like cowardly assassins, when afraid of resistance, form combinations against a single enemy, and basely overpower him by numbers. Their indelicate gluttony is as remarkable as their cowardice: rats, serpents, fish, and the flesh of dead animals, though half rotten, are equally acceptable; putrefaction, instead of deterring, seems to allure them. They unite the strength and

VOL. IV. No. 51. I cruelty

cruelty of the tiger, with the cowardice and gluttony of the jackal: like them, they assemble in flocks, devour carrion, and dig up the carcases of the dead: of this genus, there are twenty-one species; the most remarkable of which are as follow:

THE GRYPHUS, OR CONDOR.

THE condor is not only the largest of this genus, but perhaps of all others which are able to fly. The accounts of authors in regard to its extent of wing are various, viz. from nine to eighteen feet from the tip of one wing to that of the other. One gives it strength sufficient to carry off sheep, and boys of ten years old; while another ventures to affirm, that it can lift an elephant from the ground high enough to kill it by the fall! M. de Salerne says, that one of this kind was shot in France in the year 1719, which weighed 18 lib. and whose extent of wing was eighteen feet. But, to come nearer the truth, perhaps it is better to abide by descriptions which bear a moderate proportion. In Hawkesworth's edition of Cook's Voyages, mention is made of one of these birds shot at Port Desire, off Penguin island, of which he gives the following description: "The head of this bird resembled that of an eagle, except that it had a large comb upon it. Round the neck it had a white ruff, exactly resembling a lady's tippet; the feathers on the back were as black as jet, and as bright as the finest polish could render that mineral; the legs were remarkably strong and large, and the talons like those of an eagle, except that they were not so sharp; and the wings, when they were extended, measured, from point to point, no less than twelve feet." This last account seems by no means to exceed the natural size, since we have an account in the Philosophical Transactions of one of the quill-feathers of this bird, brought from Chili, which measured twelve feet four inches; the diameter of the quill half an inch; and



The Condor.

Published Jan'y 1800.



and the extent of wing sixteen feet. This bird was met with in latitude 33 south, not far from the island Mocha, in the South Sea, in the year 1691. The seamen shot it on a cliff by the sea-side; and, taking it for a kind of turkey, made a meal of it. In this account we are told that the colour was black and white, like a magpie, and the crest or comb sharp like a razor.

It seems now certain, that the account given by the editor of Cook's Voyage is very nearly, if not precisely, the truth, as two birds of this kind are in the museum of Mr. Parkinson, Albion Place, Blackfriars, London; and are probably male and female. The first of these has an extent of wing somewhat under eleven feet. The bill is strong, moderately hooked, and blunt at the tip, which is white, the rest of it being of a dusky colour. On the top of the head runs a kind of carunculated substance, standing up like the comb of a cock. The head and neck are slightly covered with brown down, in some parts nearly bare, and here and there a carunculated part, as in the neck of a turkey. The lower part of the neck is surrounded with a ruff of a pure white and hairy kind of feathers. The upper parts of the body, wing, and tail, are black, except that the middle wing coverts have whitish ends, and the greater coverts half black half white. The nine or ten first quills are black, the rest white, with the tips only black; and, when the wings are closed, producing the appearance of the bird having the back white; giving occasion to Molruc, in his History of Chili, to say, that the back was white. The under parts of the body are rather slightly covered with feathers; but those of the thighs are pretty long. The legs are stout and brown; claws black and blunt.

The second bird in Mr. Parkinson's collection chiefly differs from the first, in having not the least appearance of a comb or crest, but smooth for the most part, except where the head and neck are covered with down: the ruff on the lower part of the neck is not so full and

conspicuous; but, as to the colour of the plumage, the difference is not worth noticing. It is not impossible but this last may prove to be a young male; for Mol-ruc expressly says, that the female is smaller than the male, of a brown colour, and has no ruff about the neck, only a small tuft at the back part. These birds are said to make their nests among the inaccessible rocks, and to lay two white eggs, larger than those of a turkey; are very destructive to sheep, and will in troops often attempt calves; in which case, some of them first pick out the eyes, whilst others attack the poor animal on all sides, and soon tear him to pieces. This gives rise to the following stratagem, used by the peasants of Chili: one of them wraps himself up in the hide of a fresh-killed sheep or ox, and lies still on the ground; the condor, supposing it to be lawful prey, flies down to secure it, when the person concealed lays hold of the legs of the bird, his hands being well covered with gloves; and immediately his comrades, who are concealed at a distance, run in, and assist to secure the depredator, by falling on him with sticks till they have killed him.

P. Feuillée, a French naturalist, seems to have given a minute description of this bird. "I discovered," says he, "in the valley of Ilo, in Peru, a condor perched on a high rock before me; I approached within musket shot, and fired; but, as my piece was only loaded with swan-shot, the lead was not able sufficiently to pierce the bird's feathers. I perceived, however, by its manner of flying, that it was wounded, as it rose heavily, and with a good deal of difficulty reached another rock, about five hundred yards distant, upon the shore; I therefore loaded again, with a ball, and on the second shot hit the bird under the throat, which made it mine. I accordingly ran up to seize it; but, even in death, it was terrible, and defended itself on its back, with its claws extended against me; so that I scarcely knew how to lay hold of it. Had it not been mortally

wounded, I should have found it no easy matter to take it; but I at last dragged it down from the rock, and, with the assistance of one of the seamen, carried it to the tent, to make a coloured drawing. The wings of this bird measured exactly eleven feet four inches from one extremity to the other: the great feathers, that were of a beautiful shining black, were two feet two inches long: the thickness of the beak was proportionable to the rest of the body; the length about four inches; the point hooked downwards, and white at its extremity, and the other part was of a jet black. A short down of a brown colour covered the head; the eyes were black, and surrounded with a circle of reddish brown: the feathers on the breast, neck, and wings, were of a light brown; those on the back rather darker: its thighs were covered with brown feathers down to the knee: the thigh-bone was ten inches long; the leg five inches; the toes were three before and one behind; the latter was an inch and an half long, with a single joint; and the claw with which it was armed was black, and three-quarters of an inch; the other claws were in the same proportion, and the legs and toes covered with black scales. These birds usually frequent the mountains, where they find their prey: they never descend to the sea shore but in the rainy season; sensible of cold, they repair there for warmth. Though these mountains are situated in the torrid zone, the cold is often very severe; for, almost the whole year, they are covered with snow; but especially during the winter, it is a great depth upon them. The small quantity of nourishment which these birds find on the sea-coast, except when the tempest drives in some great fish, obliges the condor to remain there but a short time. He usually comes to the coast at the approach of evening, remains there all night, and returns again in the morning."

The condor thus described by Feuillée seems to have been much inferior in size to those described by Acosta, Garcilasso,

Garcilasso, Demarchais, and some other travellers. Condamine assures us, that he has often seen vultures in the province of Quito, and on the borders of the Maragnon, hovering over a flock of sheep, some of which they would have carried off, had they not been scared by the shepherds. It is reported that the Indians of these countries catch them, by working a piece of viscous clay into the form of a child, upon which they dart with such rapidity, that their claws are entangled, so as to prevent their escape. De Solis, alluding to this bird, says, that there were among the curiosities of the Emperor of Mexico, birds of such extraordinary fierceness and size, that they appeared monsters; that he had been informed each of them could devour a sheep at a single meal.

After reading the history of these birds, the fiction of Virgil's harpies appears less extravagant, or rather seems to sink into mere narrative. The condor is happily a rare bird in every quarter of the globe. Fitted by nature to live on every kind of food, he flies the haunts of men, and dwells on the high mountains, or in deserts, where he is seldom seen. The wild mountains of Peru, where he resides, inspire a secret horror in the mind. There the broken precipices seem to forbid the approach of man; and the still and gloomy forests are never made vocal by the note of any bird. The condor, the serpent, and the panther, are the frightful inhabitants of these dreary abodes, and add terror and solemnity to the grand scenes which nature, in all her primeval wildness, there presents to the eye of the traveller,---Synonymes. Le condor, *Buffon*. *Vultur gryphus*, *Lin.* *Avis ingens Chilensis*, *cuntur*, *Raii*.

THE KING OF THE VULTURES.

THIS bird is called the king of the vultures, not from its size, but on account of its beautiful appearance. It is a native of America, and not of the East Indies, as some authors would induce us to believe.

It





Edwards del.

The King of the Vultures.

Published March 1798.

It is larger than a turkey cock, but is chiefly remarkable for the odd formation of the skin of the head and neck. Its bill is thick and short, and begins its curvature only at the point; in some the bill is entirely red, in others only red at the extremity, and black in the middle; the cere is of an orange colour, broad, and stretching from each side to the crown of the head; in the cere are placed the nostrils, of an oblong shape, and between which the skin projects like a loose jagged comb, falling indifferently on either side, according as the bird moves its head; the eyes are surrounded by a red skin, and the iris has the colour and lustre of pearls; the head and neck are naked, the crown covered with a flesh-coloured skin, which is of a lively red behind, and darker before; below the hind part of the head rises a small tuft of down, from which there extends, on each side under the throat, a wrinkled skin of a brownish colour, and mixed with blue and red near its termination; this skin is marked with small lines of black down. The cheeks, or sides of the head, are covered with black down; and between the bill and the eyes, behind the insertion of the mandibles, there is a brown purple spot; on the upper part of the arch of the neck there is on each side a small longitudinal line of black down, and the space included between these two lines is of a dirty yellow; the sides of the arch of the neck are of a red colour, which as it descends passes by insensible shades into yellow; under the naked part of the neck is a collar or ruff composed of pretty long soft feathers of a deep ash-colour; this collar, which entirely encircles the neck, and descends upon the breast, is so broad that, when the bird contracts itself, it can conceal the neck and part of the head like a cowl; and this is the reason why some naturalists have given it the name of Monk. The feathers on the breast, belly, the thighs, the legs, and the under surface of the tail, are white, slightly tinged with yellow; those of the rump, and the upper surface of the tail, vary, being

being black in some individuals, and in others white: the other feathers of the tail are always black, and so are the great feathers of the wings, which are commonly edged with grey. The colour of the feet and nails is not the same in all these birds; in some the feet are of a dull white, or yellowish, and the nails blackish; in others, the feet and nails are reddish; the nails are very short, and but slightly curved.

This bird, though beautiful, is no way distinguished from the rest by the generosity of his manners, or the delicacy of his appetite. He attacks only the weaker animals, devouring rats, lizards, serpents, and every kind of excrement or filth.---Synonyme. *Vultur papa*, *Lin.* *Vultur monachus*, *Klein.* *Rex vulturum*, *Briffon.* *Cozcacoauhtli*, *Raii.* *Queen of the auræ*, *Will.* *King of the vultures*, *Edw. Alb. & Lath.*

THE PERCNOPTERUS, OR EGYPTIAN VULTURE.

THE appearance of this bird is as horrid as can well be imagined; the face is naked and wrinkled; the eyes are large and black; the beak black and hooked; the talons large, and extending ready for prey; and the whole body polluted with filth: these are qualities enough to make the beholder shudder. Notwithstanding this, the inhabitants of Egypt cannot be enough thankful to Providence for this bird. All the places round Cairo are filled with the dead bodies of asses and camels; and thousands of these birds fly about, and devour the carcases before they putrefy and fill the air with noxious exhalations. The inhabitants of Egypt, and after them Maillet in his Description of Egypt, say, that they yearly follow the caravan to Mecca, and devour the filth of the slaughtered beasts, and the carcases of the camels which die on the journey. They do not fly high, nor are they afraid of men. If one is killed, all the rest surround him in the same manner as do the Royston crows; they do not quit the places they frequent,

frequent, though frightened by the explosion of a gun, but immediately return thither. Maillet imagines this bird to be the ibis of the ancients : but it is scarcely to be imagined, that a wise nation should pay such honours to an unclean, impure, and rapacious, bird, which was not perhaps so common before the Egyptians filled the streets with carcases. If the ibis is to be found, it must certainly be looked for in the ordo grallæ of Linnæus ; and we imagine it to be the white stork (*ardea ciconia*), which is so common in Egypt. The Arabians call it *rochæme* ; the French living in Egypt, give it the name of *chapon de Pharaon* or *de Mahometh*.---Synonymes. *Vultur percnopterus*, *Lin.* *Falco montanus Ægyptiacus*, *Hæffelq.* *Le percnoptere*, *Buffon.* *Vultur aquilina*, *Alb.*

THE AURA, OR CARRION VULTURE.

THIS bird is classed among the vultures, because it is not only possessed of the same habits, but, like the rest of this genus, has the head and neck naked of feathers : the wrinkled skin with which these parts are covered, is variegated with blue, white, and red, colours, somewhat resembling that of a turkey-cock : a circumstance from which these birds have been called *gallinafossos* by the Portuguese and Spaniards. It is about the size of a wild goose ; its wings, when folded, extend beyond the extremity of the tail : the feathers of the whole body are blackish, with a shade of dark green and purple : the beak is white, the legs and feet of a flesh colour. This bird is an inhabitant of Brasil, Guiana, Peru, and some of the West-India islands. In its manner, it is more cowardly, nasty, and voracious, than perhaps any of the genus. If its high and rapid flight were attended with a proportionable degree of courage, it might live by the chace ; incapable, however, of facing danger, it contents itself with carrion, and every kind of filth, and will not attack an animal,

even when wounded or asleep, unless able to overpower it by numbers.

The carrion vultures are generally seen in large flocks, fly very high in the air, and pass the night upon the tallest trees, or on the most inaccessible rocks, from which they repair by day to the neighbourhood of towns, where they alight on some eminence to watch their prey: their sight and smell are remarkably penetrating; they discern their food at a great distance; which, as soon as discovered, they all fall upon at once, and devour it in silence, till they are frequently so glutted, that they are unable to rise from the ground. As often as this is the case, they are said to have the power of vomiting their food, till their bodies are sufficiently lightened, for the purpose of making their escape. In some parts of South America, where the hunters destroy beasts merely for the skin, the vultures follow in their train in vast clouds. The numberless carcases which are flead and exposed to the air would soon render these parts unhealthy by their putrefaction, were it not for the rapacity of the vultures: no sooner do they observe a carcase abandoned, than, by a general call, they all alight upon it, and instantly devour it to the bones, which they leave as bare as if they had been scraped with a knife. An eagle often presides at the banquet, but does not suffer the vultures to approach till he has first satisfied his appetite. The Spaniards and Portuguese, who carry on a trade in hides from these quarters, take the vultures under their protection, from the benefit they render them in preserving the purity of the air, which the putrefaction of so many carcases could not fail to corrupt. From this circumstance, in Guiana, Brasil, and New Spain, they are extremely numerous; but their flesh is altogether useless for food. From the foul nature of their subsistence, it has contracted a putrid flavour which nothing can remove. In vain they try to conquer it, by taking away the entrails, or by washing or applying spices; their
hard,

hard, skinny, and fibrous, flesh, has contracted a stench which nothing can render supportable.

It is pleasing to be a spectator of the hostilities between the female alligator, or crocodile, and the carrion vultures: of all animals, they are perhaps most at enmity. The female crocodile, which in the rivers of America grows to the immense size of twenty-seven feet, lays her eggs, to the number of two or three hundred, in the sands, by the side of the water, where they are hatched by the heat of the sun. This hideous animal takes every precaution, while depositing her burden, to conceal the place from every other creature; but is unable to elude the penetrating eye of the vulture. A number of them sit silent and unseen among the branches of a neighbouring forest, while she is employed in burying her eggs, and view her operations with the eager expectation of succeeding plunder. They wait patiently till the crocodile has laid the whole number of her eggs, till she has covered them carefully under the sand, and until she is retired from them to a convenient distance: then, as Goldsmith describes, they attack all together, encouraging each other with their cries, pour down upon the nest, hook up the sand in a moment, lay the eggs bare, and devour the whole brood without remorse.

This bird is to be found also on the continent of Africa, from whence, probably, it has found its way into the New World. At the Cape of Good Hope they are called by the Dutch, *front-vogels*, or *dung-birds*. Their manners are described by Kolben, who had often been a spectator of their mode of anatomising the dead bodies of cows, oxen, and wild animals, which they devour. "These birds," says he, "separate the flesh from the skin and the bones with such art, that they leave only the bare skeleton, covered, however, with the skin so entire and unbroken, that it is impossible to perceive that the carcase is empty, without a narrow examination. In performing this operation,

they first make an aperture in the belly of the animal, from whence they tear out the entrails, and devour them: they then enter the empty space thus formed, and separate the flesh from the skin and bones, without discomposing either: they attack their prey by surprise; if an ox, who is left to return from the yoke to his stall alone, should chance to lie down and rest by the way, he is no sooner perceived by the vultures, than they inevitably fall upon him, and devour him. When they attack an ox in the fields, they generally assemble to the number of an hundred, and sometimes more, and thus overpower him by a general onset."

They lay only two eggs: they build their nests commonly in such high and inaccessible situations, that it is but rare to find them out: they inhabit, from choice, the most deserted and mountainous countries during summer; it is not till the frost and snow compel them, that they retire into lower and warmer situations: they seem more sensible of cold than the eagles, few of them being found in the northern countries.---
Synonymes. *Vultur aura*, *Linn.* Strunt-vogel, *Kolb.* Turkey-buzzard, *Catesby & Clayton.* Carrion vulture, *Sloane, Damp. Brown, Penn. & Lath.*

THE SAGITTARIUS, OR SECRETARY VULTURE.

THIS is a most singular species, being particularly remarkable from the great length of its legs; which at first sight would induce one to think it belonged to waders: but the characters of the vulture are so strongly marked throughout, as to leave no doubt to which class it belongs. The bird, when standing erect, is full three feet from the top of the head to the ground: the bill is black, sharp, and crooked, like that of an eagle; the head, neck, breast, and upper parts of the body, are of a bluish ash colour: the legs are very long, stouter than those of a heron, and of a brown colour; claws shortish, but crooked, not very sharp, and of a black

black colour; from the hind head springs a number of long feathers, which hang loose behind like a pendent crest; these feathers arise by pairs, and are longer as they are lower down in the neck; this crest the bird can erect or depress at pleasure; it is of a dark colour, almost black; the webs are equal on both sides, and rather curled; and the feathers, when erected, somewhat incline towards the neck; the two middle feathers of the tail twice as long as any of the rest. This singular species inhabits the internal parts of Africa, and is frequently seen at the Cape of Good Hope. It is also met with in the Philippine islands. As to the manners of this bird, it is on all hands allowed that it principally feeds on rats, lizards, snakes, and the like; and that it will become familiar: whence Sonnerat is of opinion, that it might be made useful in some of our colonies, if encouraged, towards the destruction of those pests. They call it at the Cape of Good Hope slang-eater, i. e. snake-eater. A great peculiarity belongs to it, perhaps observed in no other; which is, the faculty of striking forwards with its legs, never backwards. Dr. Solander has seen one of these birds take up a snake, small tortoise, or such like, in its claws; when, dashing it from thence against the ground with great violence, if the victim was not killed at first, it repeated the operation till that end was answered; after which it ate it up quietly. Dr. J. R. Forster mentions a further circumstance, which he says was supposed to be peculiar to this bird; that, should it by any accident break the leg, the bone would never unite again.

THE FULVOUS, OR BROWN VULTURE.

THIS bird is eight feet in breadth, when its wings are extended: its neck is almost entirely divested of feathers; upon the top of the head, however, there is a tuft forming a kind of crest, beneath which are seen the apertures of the ears: the crop or stomach of this species is remarkable for a large cavity, covered with
hairs

hairs all pointing from the circumference to its centre. The largest feathers of the wing are two feet in length, the quill of each above an inch in circumference.

This bird is believed to be the great vulture mentioned by Aristotle. So vague and loose are the terms employed by that father of naturalists, that it is now no easy matter to determine with certainty the species to which his descriptions ought to be applied. His remarks were general and detached; he had probably no collection of animals; and it is certain he had no idea of composing a system of natural history. From the observations made by the gentlemen of the academy of sciences at Paris, it appears that the internal structure of this bird, as well as that of the rest of the genus, differs considerably from the rapacious tribes of hawks and eagles. Their organs of digestion approximate to those of the gallinaceous birds who feed upon grain: they have a sort of gizzard of great muscular force, which is no less calculated for the trituration of grain than the digestion of flesh. This genus may be regarded not so much granivorous or carnivorous, but as endow'd with a capacity of devouring every thing.---Synonymes. *Le griffon, Buffon.* *Vultur fulvus, Lin.* *Vultur ruber, Rzac.*

THE CINEREOUS, OR GREAT ASH-COLOURED VULTURE.

THE feathers of this species are rather black than ash-coloured; it is of the size of the common eagle, and is distinguished from the brown vulture, which it most nearly resembles, by a much longer and closer covering of down, of the same colour with the feathers of the back, and by a sort of white cravat which proceeds from each side of the head, and reaches down the neck: the legs and feet of this species are characteristic; the former being covered with brown feathers, and the latter being yellow.---Synonymes. *Le grand vautour, Buff.* *Vultur cinereus, Lin.* *Vauture hupe, Briss.*

THE

THE CRESTED VULTURE.

THIS vulture is inferior in size to the former; its magnitude, however, has been deemed sufficient to entitle it to a place among the vultures. Its bill is black, and hooked at the end; the feathers of a brownish black, and the legs yellow. When upon the ground, it raises two tufts of feathers on the sides of its head, resembling horns; which, while the bird is on the wing, are not perceptible: the wings of this bird, when extended, are six feet; his flight is more rapid than the rest of the vulture tribes, as his courage and activity are greater. He pursues and preys upon almost every species of bird; but is most successful in chasing hares, rabbits, young foxes, fawns, and even fishes. When pursuing his prey, his flight seems to be the effect of much effort; and it is attended with a great noise. His favourite food is the entrails of animals, whether dead or alive; and, though remarkable for voracity, he can endure an abstinence of fourteen days. Gesner relates, that two of this species were caught in the province of Alsace, in a nest constructed upon a very tall oak, not far from the town of Misen.---Synonymes. *Vultur cristatus*, Linn. *Le vautour à aigrettes*, Buff. *Vultur leporarius*, Ray, Will. & Klein.

THE GOLDEN VULTURE.

THE golden vulture is the most remarkable of the European birds of this tribe; and in many particulars it resembles the golden eagle, only surpassing it in every proportion. From the top of the bill to that of the tail, it measures four feet eight inches: the bill is about seven inches long; the tail two feet three inches, and the largest feathers of the wing are about three feet: the head, throat, and upper part of the neck, are covered with a pale red brown: the back, rump, and coverts of the tail, are blackish; all the lower parts of the body, the breast, belly, and sides, are
bronze,

80 NATURAL HISTORY

bronze,---deep towards the head of the bird, but yellowish as they approach nearer the tail.---Synonymes. *Vultur aureus*, *Alberti Magni*, *Gesn. Ray*, *Will. Klein*. *Vultur bæticus*, five *castaneus*, *Alb.* Le vautour doré, *Briss.*

The other species of vultures differ in size and colour, but are all distinguishable by their naked heads and necks; their bills strait from the base, but crooked towards the point. The species most recently discovered, and omitted in Buffon, are as follow: The bearded vulture, or *vultur barbatus*; from Barbary. The Arabian vulture, or *vultur monachus*. The black vulture, or *vultur niger*; found frequently in Egypt: its quills are brown, and its feet feathered. The Pondicherry vulture, or *vultur ponticerianus*. It is black, its head and neck rather naked and carnation, a red fleshy caruncle on the sides of the neck. It is of the size of a goose. The Angola vulture, or *vultur angolenfis*. It is white, and of the same size with the preceding. The Indian vulture, or *vultur indicus*. It is brown, its upper side marked with pale stripes; its head and neck naked and rufous; its quills black. It inhabits the coasts of India, and is exceedingly voracious. The gingi vulture, or *vultur gingianus*. It is white, its wing-quills black, its legs and bill gray. It is known in India by the name of wild turkey. The tawny vulture, or *vultur ambustus*; from the Falkland islands. The plaintive vulture, or *vultur plancus*; from Terra del Fuego. The cheriway vulture, or *vultur cheriway*; from the island Aruba.

Vultures, although rare in Europe, are extremely numerous in Egypt, Arabia, and the islands of the Archipelago: there their skins, which are as thick as that of a kid, constitute a valuable article of commerce. Those who deal in them take off the large hard feathers, leaving a fine, thick, and warm, down, which covers the skin, and renders it a comfortable wear, when made an article of clothing. After they have gorged themselves

themselves with an excess of food, they cannot easily take their flight, and are in that condition readily caught by dogs, or killed by stones or cudgels thrown at them by the inhabitants.

The eagle chases by the eye; but, the smell of the vulture being far more acute, it is probable he is most frequently directed to his prey by that sense: no sooner does an animal drop, than they are assembled round it from all quarters, though distant far beyond the reach of sight: their internal formation differs considerably from birds of the eagle or hawk kind; like granivorous birds, they have both a crop and a stomach, which, from the strength of the muscles of which it is composed, may be considered as a gizzard: they seem adapted inwardly, not only for being carnivorous, but to devour grain, and almost every kind of food that can gratify their voracious habits.

FALCO, or the EAGLES.

THIS is by far the most numerous tribe of rapacious birds, the distinguishing characters of which are these: the bill is hooked, and furnished at its base with a core; the head closely beset with feathers; and the tongue bifid or cloven. Linnæus has, with propriety, classed the eagles and falcons, or hawks, under one genus; as their generic character seems perfectly the same. He enumerates thirty-two species. Mr. Ray and Brisson separate the eagles from the falcons: the former has eight species of eagles, and twenty-five of falcons; the latter fifteen of eagles, and thirty-seven of hawks. Such is the uncertainty of classification, that one naturalist considers as a species, what another only marks as a variety. Besides which, there have been so many new discoveries made in the families of birds, by the late voyages round the world, the expeditions to New South Wales, and the journies of Gmelin, Pallas, Jacquin, &c. that this genus is now found to

contain a hundred and twenty-one species, exclusive of a multitude of varieties.

The eagle is considered by far the noblest, and most generous, of the rapacious birds. The golden eagle was sacred to Jupiter; the Persians, and after them the Romans, assumed this bird for their ensign in war; one was represented on the standard before each legion. They generally inhabit the mountains and rocky countries; some species of them are to be found almost in every quarter of the world; several different kinds inhabit Britain. So great is the native fierceness of the eagle, that hardly any effort will render it so tame and familiar, as to qualify it for the chase. We are informed, that they were anciently employed for this purpose in the east; but we have long since banished them from our system of falconry: they are too heavy to be able, without great fatigue, to outstrip the game, and never so tame and gentle, but their caprices or rage are at some moments formidable to their keepers: their beaks and claws are hooked and frightful. Every part of their figure corresponds to their disposition; for, independent of these arms, the whole body is compact and robust; their legs and wings are strong, and their feathers hard; their movements quick, and flight rapid.

The eagle, of all birds, flies highest in the air; for which he obtained from the ancients, the name of the bird of heaven, and was regarded in their omens as the messenger of Jove. His sense of sight is also exquisite; but in that of smelling, he is far inferior to the vulture; he only chases by sight, and, as soon as he has seized his prey, drops from his height, as if to examine its weight, always laying it on the ground before he carries it off. Although his wings are strong, yet, as he has not much suppleness in his legs, he finds it difficult, especially when laden with prey, to rise from the ground. He easily carries off geese, cranes, lambs, and kids; and, when he attacks fawns or calves, it is to glut himself with blood upon the spot, and to carry away pieces of their

their flesh to his airie, which is the name given to his nest. It is asserted, that the same nest serves the eagle the whole of its life; and it seems indeed to be of such a bulk, and of such durable materials, that a frequent repair is hardly necessary. It is commonly of a flat form, built of large sticks, upon the dry and inaccessible part of a rock, lined with several layers of reeds or brambles: it is several feet in breadth, and of such strength as may support, not only the eagle and her young, but also a large quantity of food which she lays up in store for them. In the middle of this airie does the female deposite two or three eggs, which she continues to hatch for thirty days. Rarely, however, are the whole even of that small number productive; two, and sometimes one eaglet, is the extent of her family; the smaller kinds indeed are more prolific, but the whole race is marked by infecundity. It is reported, that they sometimes still farther diminish the number of their offspring, by putting to death the most feeble or most voracious. It is certain that they are no sooner able to fly, than they banish them from the nest, without ever allowing them to return. Famine is probably the cause of a conduct seemingly so repugnant to nature.

Eagles are remarkably voracious at all times, but more particularly in the breeding season. It is then that they spread devastation among the kids, lambs, and all sorts of game. Smith, in his history of Kerry, relates that a poor man, in that country, got a comfortable subsistence for his family, during a summer of famine, by robbing the eaglets of the food that was carried to the nest by the parents. He ingeniously protracted the time of the imbecillity of the young, by clipping their wings, and retarding their flight. If what is related by Goldsmith be true, this is rather a dangerous undertaking; for, had the old eagles surprised the countryman while thus employed, their revenge might have proved fatal to him. "It happened some time ago," says that writer, "in the same country,

try, that a peasant had resolved to rob the nest of an eagle, that had built in a small island in the beautiful lake of Killarney. He accordingly stripped and swam in upon the island, while the old ones were away; and, having robbed the nest of its young, he was preparing to swim back, with the eaglets tied in a string; but, while he was yet up to his chin in the water, the old eagles returned, and, missing their young, quickly fell upon the plunderer, and, in spite of all his resistance, dispatched him with their beaks and talons."

Martin, in his History of the Western Isles, records instances of two children being carried off by eagles at the breeding season; but fortunately the theft was discovered in time, and the children were restored unhurt out of the nests, to their affrighted parents: "*Illæsum unguibus hæsit onus.*" It was probably from some daring adventure of this kind, that the fable took its rise, of Ganymede's being snatched up to heaven by an eagle. They seem to have been extremely numerous and destructive in the northern parts of Britain. Camden mentions a law in the Orkney isles, which entitles every person that kills an eagle to a hen out of every house of the parish where the act was done.

The colours of the plumage of the eaglets are not so strong as they afterwards become in their adult state; at first they are white, afterwards of a pale yellow, and then of a deeper and brighter hue of the same colour. Age, famine, long captivity, and diseases, make them gradually whiter. Eagles are not less remarkable for their power of sustaining a long abstinence from food, than for their longevity. Mr. Keyser relates, that an eagle died at Vienna, after a confinement of 104 years. This pre-eminent length of days probably gave occasion to the saying of the Psalmist, "Thy youth is renewed like the eagle's." Mr. Pennant mentions one in the possession of Owen Holland, Esq. of Conway, which he had kept for nine years, and the gentleman from whom he received it thirty-two. To the latter
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it had been sent from Ireland, but at what age is not known. The abstinence of this bird was cruelly tried by the neglect of servants, who had suffered it to endure hunger for twenty-one days without receiving any sustenance whatsoever.

Eagles, when tamed, M. Buffon asserts, can be fed with any kind of flesh whatever, even with that of their own species; and, on a deficiency of flesh, they will readily devour bread, serpents, or lizards. When they are but imperfectly tamed, they attack dogs, cats, men, and every creature that attempts to approach them: their fierceness is rendered still more formidable by the shrill, piercing, and lamentable, cries which they utter: they drink but seldom, and when in a state of freedom probably none at all, the blood of animals then serves to quench their thirst: their excrements are always soft and humid, even in a greater degree than those birds who drink frequently; and they are tinged with that whitish substance which mixes with the urine of all birds, and makes so great a part of its composition.

The eagle has been compared by naturalists to the lion; and there are many circumstances, in which it must be allowed that they bear a striking resemblance to each other: the former, endowed with strength, maintains the same empire over the birds, that the latter does over the quadrupeds: both are distinguished by a magnanimity which disdains the insults of the inferior tribes: it is not till after he has been long provoked by the impertinent clamours of the crow or the jackdaw, that the eagle is determined to punish him with death: neither has any property that has not been acquired by the rights of war; neither desires any spoils that are not the fruits of his own victories; neither is so voracious as to devour the whole of his prey, but leaves his remains to less bold and successful plunderers. The eagle, in a state of freedom, however much famished, will not stoop to carrion; and, when satiated, he never returns to the same carcase, but leaves it to
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other animals more rapacious and less delicate than he. Equally solitary with the lion, he inhabits a desert, of which he usurps the sole dominion, and drives away every other bird from chacing there; for it is as rare to find two pair of eagles upon the same mountain, as two families of lions in the same part of the forest: they keep far separate, in order to secure an ample supply of food; and seem only to estimate their valour by the extent of their dominions, and the quantity of booty which they contain.

The resemblance of these two animals does not stop here: if the vulture among birds comes in the place of the tiger among beasts, the eagle seems equally well entitled to rank with the lion. His eyes sparkle like those of the lion, with the same fiery colour; his claws are of the same form; his breath is as strong: and his cry equally loud and terrifying. Bred both for war, they are enemies of all society; alike fierce, proud, and difficult to tame, it requires the utmost pains and assiduity to bring them into subjection. "An eagle," says Goldsmith, "even though taken young, and brought under, by long attention, is still a dangerous domestic, and often turns its force against its master. When brought into the field for the purposes of fowling, the falconer is never sure of its attachment; that innate pride, and love of liberty, still prompt it to regain its native solitudes; and the moment the falconer sees it, when let loose, first stoop towards the ground, and then rise perpendicularly into the clouds, he gives all his former labour for lost, quite sure of never beholding his late prisoner more. Sometimes, however, they are brought to have an attachment for their feeder: they are then highly serviceable, and liberally provide for his pleasure and support. When the falconer lets them go from his hand, they play about and hover round him till their game presents, which they see at an immense distance, and pursue with certain destruction."

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The internal structure of eagles has been described by the gentlemen of the academy of sciences in Paris, who dissected a male and female of the common species. After remarking, that the eyes were deep sunk; that they were of a pink colour, with the lustre of the topaz; that the cornea was arched with a great convexity; that the ligament was a bright red, the eye-lids large, and sufficient to cover the whole eye; they observed, with respect to the interior structure, that the tongue was cartilaginous at the tip, and fleshy in the middle; that the larynx was blunt and not pointed, as in most of the birds whose bills are straight; that the œsophagus was very large, and widened below to form the stomach; that this stomach was not a hard gizzard, but pliant and membranous like the œsophagus, and only thicker at the bottom; that these two cavities, both the lower part of the œsophagus and that of the stomach, were very broad, and suited to the voracity of the bird; that the intestines were small, as in all other animals which feed on flesh; that there was no cæcum in the male, but in the female there were two pretty broad ones, more than two inches long; that the liver was large and of a bright red, the left lobe larger than the right; that the gall-bladder was large, and about the size of a chesnut; that the kidneys were small, compared with the other parts, and with those of other birds; that the male-testicles were only of the size of a pea, and of a yellow flesh colour; and that the ovarium and vagina of the female were like those of other birds.

THE GOLDEN EAGLE.

THE first species is the golden eagle, which Belon named, after Athenæus, the royal eagle, or the king of birds. This is indeed an eagle of a noble family and of an independent race. Hence Aristotle denominates it *αἰτός γυναικός*, the eagle of birth, and our nomenclators have named it the golden eagle. It is the largest of the genus. The female measures, from the point of
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the bill to the extremity of the feet, more than three feet and an half; the wings, when expanded, extend above eight feet, and it weighs sixteen or eighteen pounds: the male is smaller, and does not weigh more than twelve. In both the bill is very strong, and resembles bluish horn; the claws are black and pointed, and the one placed behind, which is the largest, is sometimes five inches long: the eyes are large, but sunk in a deep cavity, and covered by the projection of the superior part of the orbit: the iris is of a fine bright yellow, and sparkles with dazzling fire; the vitreous humour is of a topaz colour; the crystalline lens, which is dry and solid, has the lustre and brilliancy of the diamond: the œsophagus dilates into a large bag, which is capable of containing a pint: the stomach, which is under this, is not near so large, but is equally pliant and membranous. The bird is plump, especially in winter: the fat is white, and the flesh, though hard and fibrous, has not that wild flavour common to birds of prey.

This species inhabits Greece, the mountains of Bugey in France, those of Silesia in Germany, the forests of Dantzic, the summits of the Carpathian mountains, the Pyrenees, and the mountains of Ireland. It is found also in Asia Minor, and in Persia; for the Persians had, before the Romans, assumed the eagle as the standard of war; and it was this great eagle, this golden eagle, *aquila fulva*, which was consecrated to Jupiter. The testimony of travellers ascertains its existence in Arabia, in Mauritania, and in many other provinces of Africa and Asia, as far as Tartary; but it has not been discovered in Siberia, or in any other part of the north of Asia. This noble bird, which is every where rare, is more frequent in the warm regions than in the temperate countries, and it is seldom observed to penetrate farther northwards than the latitude of fifty-five degrees. Nor is it found in North America, though the common eagle is an inhabitant of that part of the globe.

globe. The golden eagle seems to have continued its ancient residence, like the other animals, which, being unable to support an intense cold, could not migrate into the new world.

The wings and limbs of the golden eagle are remarkable for strength; his bones are firm, and his feathers hard. He is of a fierce and haughty aspect; his flight is rapid, and all his motions indicate vigour and activity. Of all birds, this species is, perhaps, capable of taking the highest flights, and, on this account probably, it obtained the office of messenger to Jove in the fanciful mythology of the ancients. The sight of this animal is quick and piercing, the index of a bold and independent spirit: such at least are the attributes ascribed to independence by the poet, who styles him, "Lord of the lion-heart, and eagle-eye." It is accordingly by this sense, and not by the smell, that this bird is directed in hunting its prey. When he has seized his booty, he stops his flight, and for a moment places it upon the ground, as if to feel its weight, before he carries it away. Although his wings are strong and expansive, yet from the shortness of his legs, he finds a difficulty in raising himself, especially when loaded with prey. This species, however, can carry off, with ease, geese, cranes, hares, and even lambs and young goats. When he attacks deer and calves, it is to glut himself with their blood upon the spot, or to carry morsels of them to feed his young.

His family commonly consists of one or two eaglets, of which it is said, that the mother kills the most weakly and infirm: this conduct, so entirely opposite to the dictates of nature, can only proceed from the most urgent necessity. It is only when the parents are unable to provide for themselves, that they consent to diminish the number of their offspring, or to banish them from the nest before they are sufficiently able to provide for themselves. The eagles, when young, are white; afterwards they become of a pale yellow, which

deepens as they advance. Age, fasting, disease, and captivity, gradually reduce them again to their primitive white. It is asserted, that this species will live for more than a century, and that even then, their death is not so much occasioned by age, as by the excessive incurvation of their bills, which prevents them from receiving food.

The Emperor of Thibet has several of these eagles, which are so keen and fierce, that they seize hares, bucks, does, and foxes; and, there are some so extremely bold, that they rush impetuously upon the wolf, and harass him so much that he can be more easily caught.---*Marco Paolo*.

Linnaeus gives the specific character of the golden eagle as follows: "Its cere is yellowish, its feet woolly and rusty-coloured, its body of a dusky variegated ferruginous colour, the tail black, with a waved cinereous base." He adds, that its feet are clothed with feathers as far as the nails; and that in fine weather it soars into the aerial regions, but, when there is an impending storm, it hovers near the earth.

Synonymes.---*Le grand aigle, Buffon*. *Falco chrysaetos, Lin.* In Spanish, *aquila coronada*. In Polish, *orzelpredni*. In Persian, *an si muger*. In Syriac, *napan*. In Chaldaic, *nifra*. In Arabic and Hebrew, *nefer*.

THE RING-TAIL, OR COMMON EAGLE.

THIS species is not so pure or generous as the golden eagle. It is composed of two varieties; the brown eagle and the black. Aristotle has not distinguished them by name; and it appears that he classed them under the denomination of *Μελαιναετος*; that is, black or blackish eagle. They are both nearly of the same size; they are of the same brown colour, only sometimes of a deeper shade; in both the upper part of the head and neck is tinged with ferruginous, and the base of the large feathers marked with white; the legs and feet are alike clothed; in both, the iris is of a hazel colour, the
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cere of a bright yellow, the bill that of a bluish horn, the toes yellow, and the talons black: in short, the whole difference consists in the shades and distribution of the colour of the feathers; which is by no means sufficient to constitute two different species, especially when the number of the points of resemblance so evidently exceeds that of the difference. Aristotle names this bird γαλωφάρως, or the destroyer of hares. In fact, though the other eagles also prey upon hares, this species is a more fatal enemy to those timid animals, which are the constant object of their search, and the prey which they prefer. The Latins, after Pliny, termed this eagle *valeria*, *quasi valens viribus*, because of its strength, which appears greater than that of the other eagles in proportion to the size.

The ring-tail eagle is more numerous and extended than the golden eagle. The latter is found only in the warm and temperate countries of the ancient continent; the former prefers the cold tracts, and inhabitants of both continents. It occurs in France, Savoy, Switzerland, Germany, Poland, Scotland, and even in North America, at Hudson's Bay, &c. Ellis tell us, that about Hudson's Bay there are many of the white-tailed eagle, which is nearly of the size of a turkey-cock; its crown flattened, its neck short, its breast large, its thighs strong, and its wings very long and broad in proportion to its body; they are blackish behind, but also of a lighter colour on the sides; the breast is marked with white, the wing-feathers are black; the tail when closed is white above and below, except the tips of the feathers, which are black or brown; the thighs are covered with blackish brown feathers, through which in some places the white down appears; the legs are covered to the feet with a brown or somewhat reddish plumage; each foot has four thick strong toes, three before and one behind; they are covered with yellow scales, and furnished with nails that are exceedingly strong and sharp, and of a shining black. This species is frequent in Scotland, where it is called

the black eagle from the dark colour of its plumage. It is very destructive to deer, which it will seize between the horns; and, by incessantly beating it about the eyes with its wings, soon makes a prey of the harassed animal. The eagles in the isle of Rum have nearly extirpated the stags that used to abound there. They generally build in clefts of rocks near the deer-forests; and make great havock not only among them, but also among the white hares and ptarmigans. Mr. Willoughby gives the following curious account of the nest of this species. "In the year 1668, in the woodlands near the river Darwent, in the peak of Derbyshire, was found an eagle's nest made of great sticks, resting one end on the edge of a rock, the other on two birch trees; upon which was a layer of rushes, and over them a layer of heath, and upon the heath rushes again; upon which lay one young one and an addled egg; and by them a lamb, a hare, and three heath-poults. The nest was about two yards square, and had no hollow in it. The young eagle was black as a hobby, of the shape of a goshawk, almost of the weight of a goose, rough-footed, or feathered down to the foot; having a white ring about the tail."

The specific character given by Linnæus of the ring-tail eagle is, "that its cere is yellow; its feet woolly and dull rust coloured; and its tail marked with a white ring." The brown sort was stated in the tenth edition of the *Systema Naturæ*, as a distinct species, by the name of *falco canadensis*, and described as "having a yellow cere, its feet woolly, its body dusky-coloured, its tail white, and tip with brown." In the twelfth and subsequent editions, however, it is considered as merely a variety: the spaces between its eyes and its ears are naked. Its breast is sprinkled with triangular spots. The black eagle, termed by Frisch, *schwarzbraune adler*, (black-brown eagle,) which Buffon ranges with the ring-tail eagle, is reckoned a different species by Linnæus, under the name of *falco melanæetus*. "Its

cere is yellowish, its feet partly woolly, its body black-ferruginous, with yellow streaks." It is two feet ten inches long. The half of the wing feathers next their origin is white with blackish spots, the remaining half blackish. The egg is a dirty white, mottled with rusty-clouded spots.---Synonymes. L'aigle commun, *Buff.* *Falco fulvus*, *Linn.* *Aquila*, *Briss.* & *Klein.* *Chrysaetos*, *caudà annulo albo cincta*, *Will.* & *Ray.* The black eagle, *Penn.* In Spanish, *aquila conocida*. In German, *adler*, *arn*, *aar*.

THE ROUGH-FOOTED OR SPOTTED EAGLE.

THE rough-footed eagle Aristotle describes as a plaintive bird, with a spotted plumage, and smaller and weaker than the other eagles. It measures, from the point of the bill to the extremity of the feet, only two feet and a half; and its wings are proportionably smaller, scarcely extending four feet. Systematic writers have considered the crying or spotted eagle as a different species from the rough-footed. It is the *falco maculatus* of Linnaeus. The character: "Its cere and its woolly feet are yellowish, its body dusky-ferruginous below; the axillary feathers and the coverts of the wings are tipped with oval white spots." It has been termed *aquila planga*, *aquila clanga*, the plaintive eagle, the screaming eagle. These names are very applicable; for it continually utters moans, or lamentable cries: It was surnamed *anataria*, because it commonly preys upon ducks; *morphna*, because its plumage, which is of a dirty-brown, is marked upon the thighs and wings with several white spots, and its neck is encircled with a large whitish ring. It is more tractable than any of the eagles, and not so bold or intrepid. It is termed by the Arabians *zemiech*, to distinguish it from the golden eagle, which is called *zumach*. The crane is its largest prey, and it generally confines its ravages to the ducks, the small birds, and rats. This species, though
not

not plentiful in any particular spot, is scattered over the extent of the ancient continent; but it does not appear that it is found in America. If this eagle, which is much more docile, and more easily tamed, than the preceding, and which is also lighter on the hand, and less dangerous to its master, were equally intrepid, it would have been employed for the purposes of falconry. But it is as cowardly as it is plaintive and noisy. A well-trained sparrow-hawk can attack it, and come off victorious. Pennant, in his *Arctic Zoology*, gives the following account. "The Arabs used to train it for the chase; but its quarry was cranes and other birds; the more generous eagle being flown at antelopes and various quadrupeds. This species was itself an object of diversion, and made the game of even so small a falcon as the sparrow-hawk; which would pursue it with great eagerness, soar above, then fall on it, and, fastening with its talons, keep beating it about the head with its wings, till they both fell together to the ground. This Sir John Chardin has seen practised about Tauris."

The female, which in this eagle, as in all other birds of prey, is larger than the male, and also seems bolder, more intrepid, and more subtle, appears to lose its courage and sagacity when reduced to captivity. In the state of nature, the eagle never engages in a solitary chase but when the female is confined to her eggs or her young. This is the season when the return of the birds affords plenty of prey, and he can with ease provide for the sustenance of himself and that of his mate. At other times, they unite their exertions, and they are always seen close together, or at a short distance from each other. The inhabitants of the mountains, who have an opportunity of observing their manœuvres, pretend, that the one beats the bushes, while the other, perched on a tree or a rock, watches the escape of the prey. Often they soar beyond the reach of human sight, and, notwithstanding the immense distance, their cry

cry is still heard, and then resembles the barking of a small dog. This species can endure for a long time the want of sustenance : one of them, caught in a fox-trap, passed five whole weeks without the least food, and did not appear sensibly weakened till towards the last week, after which it was killed, to put an end to its lingering pain. Tho' the eagles in general prefer desert and mountainous tracts, they are seldom found in narrow peninsulas, or in islands of small extent : they inhabit the interior country in both continents, because islands are commonly not so well stocked with animals : the ancients remarked that eagles were never seen in the isle of Rhodes, and considered it as a prodigy, that, when the Emperor Tiberius visited that famous spot, an eagle perched upon the house where he lodged. Linnæus reckons the rough-footed eagle as a variety of the *falco gallinarius*, because it is smaller, and its wings more variegated : the character of the species is, " that the cere and feet are yellow, the upper part of the body dusky ; the lower tawny with dun oval spots ; the tail darkish and ringed."---Synonymes. *Le petit aigle*, Buff. *Falco nævius*, Linn. In German, *stein adler*, *gause aar*.

THE GREAT ERNE, OR CINEREOUS EAGLE.

THE head and neck of this species are of a pale ash-colour ; the body and wings cinereous, clouded with brown ; the quill feathers very dark ; the tail white ; the legs feathered but little below the knees, and of a very bright yellow : the male is of a darker colour than the female. This species is in size equal to the black eagle, and inhabits Europe as high as Iceland and Lapmark. It is common in Greenland, but does not extend to America ; or, according to Mr. Pennant, if it does, it varies into the white-headed eagle, to which it has great affinity, particularly in its feeding much on fish ; the Danes therefore call it *fiske-orn*. It is common in the south of Russia, and about the

the Volga, as far as trees will grow; but is very scarce in Siberia. It inhabits Greenland the whole year, sitting on the rocks with flagging wing, and flies slowly. It makes its nest on the lofty cliffs, with twigs, lining the middle with mosses and feathers; lays two eggs; and sits in the latter end of May or beginning of June. These birds prey on young seals, which they seize as they are floating on the water; but oft-times, by fixing their talons in an old one, they are overmatched, and drawn down to the bottom, screaming horribly: they feed also on fish, especially the lump-fish, and a sort of trout; on ptarmigans, auks, and eider-ducks: they sit on the top of rocks, attentive to the motion of the diving birds; and with quick eyes observe their course by the bubbles which rise to the surface of the water, and catch the fowls as they rise for breath. The Greenlanders use their skins for clothing next to their bodies; eat the flesh and keep the bill and feet for amulets: they kill them with their bow; or take them in nets placed in the snow properly baited; or tempt them by the fat of seals, which the eagles eat to excess; and which occasions such a torpidity as to make them an easy prey: they are common in Scotland and the Orkneys; where they feed on fish, as well as on land animals.---Synonymes. *Le grand pygargue*, *Buff.* *Falco albicilla*, *Linn.* *Pygargus albicilla hirundinaria*, *Bel. & Gessn.* *Braunfahler alder*, *Frisch.* *White-tailed eagle*, *Will.* *Cinereous eagle*, *Penn. & Lath.*

THE LITTLE ERNE, OR WHITE-TAILED EAGLE.

THIS is the *falco albicandus* of Linnæus. Its cere and feet are naked and yellowish; the head and neck ash-coloured, bordering on chesnut; the body of a dull ferruginous above, and below ferruginous and blackish; the tail white. It is of the bulk of a large cock, being two feet two inches long. The bill and iris are inclined to yellow; the tips of the quill-feathers verging

ing on black; the nails black.---Synonymes. Le petit pygargue, *Buff.* Falco albicaudus, *Linn.* Aquila albicilla minor, *Briss.* Erne, *Gesn.* Fawn-killing eagle, *Charl.* Lesser white-tailed eagle, *Lath.*

THE BALD EAGLE.

IN this species, the body is brown; the head, neck, and rectrices of the tail, white; the upper part of the legs are covered with brown feathers. It is found in Europe and North America. The manners of this species are more cruel and unnatural than those of the common eagle; it is more voracious, consequently lies under a stronger necessity of destroying or banishing its young, for which it is incapable to provide sufficient supplies of food. This voracity is remarkable in the young, which at a very early period, contend for the meat brought them by the parents, with so much fierceness and avidity, that they are forced to put an end to the dispute, by putting to death one of the combatants. Though it is an eagle of small size, it weighs nine pounds, is strong and full of spirit, preying on lambs, pigs, and fawns. They always make their nests near the sea or great rivers, and usually upon old dead pine or cypress trees, continuing to build annually on the same tree till it falls. Though he is so formidable to all birds, yet he suffers them to build near his nest without molestation; particularly the fishing hawk, herons, &c. which all build on high trees, and in some places are so near one another, that they appear like a rookery. The nests are very large, and very fetid by reason of the relics of their prey. Lawson says they breed very often, laying again under their callow young; whose warmth hatches the eggs. It often sits on an eminence, watching the motion of the osprey; and, as soon as that bird has seized a fish, it pursues it till the prey drops, and, with astonishing dexterity, catches it before it falls to the ground. In Bering's island, the bald eagle nestles on the cliffs, and

lays two eggs in the beginning of July.---Synonymes. Le pygargue à tête blanche, *Buff.* *Falco leucocephalus*, *Lin.* White-headed eagle, *Penn.* Bald eagle, *Car. & Lath.*

THE OSPREY, OR BALD BUZZARD.

THE length of this bird is nearly two feet; its breadth about five feet four inches; it is brown above, and white below; the back of the head is white; the lateral tail feathers, on the inner side, are streaked with white; the legs are bare. This bird lives upon fish, and builds its nest among reeds on the shore. It takes its prey, not by swimming, but by darting upon it. Linnæus formerly described its left foot as palmated, after the tales of ancient writers; a mistake which he has corrected in his later editions. The Italians compare the violent precipitation of this bird upon its prey, to the fall of lead into water, and hence have called it *anguista piumbina*, or the leaden eagle. Those who have opened this bird, have found fish in its stomach: its flesh savours of its food. It is less haughty and ferocious than the other eagles, and can be trained, it is said, to fishing, as other birds are to the chase. It is found through the whole of Europe, from Sweden to Greece, and on the coasts of Africa.

Linnæus has borrowed the name *haliaetus*, which he has given to this eagle, from the Greek. It is applied from the supposed predilection of this bird for the sea. This preference of a maritime situation is not strictly a fact. The bald buzzard is found in the most inland parts of the country, provided these are supplied with rivers. It might have, with equal propriety, been called a water-eagle. Aristotle gave rise to this name, as to an observation relative to the history of the bald buzzard, which it is extremely difficult to credit. He says, that these birds have a remarkable strong sight; that the old compel their young to look steadfastly at the sun, and

and put such to death as they find incapable of supporting the lustre of his rays.

The specific character which Linnæus gives of the osprey, *falco haliaëtus*, is, "that its cere and feet are cœrulean, its body dusky above and white below, and its head whitish." Besides the Carolina osprey, which is ranged by Buffon among the foreign analogous birds, there are two other varieties: 1. The reed osprey, *falco arundinaceus*, Gmel.---Its cere is ash-coloured, its feet pale, its body grey above and whitish below, and its tail is equal." 2. The Cayenne osprey, *falco Cayanensis* Gmel.---"Its body is dusky ferruginous, and there is a white line drawn from the upper mandible through each eye to the hind part of the head, which is also white."---Synonymes. Le balbuzard, Buff. *Falco haliaëtus*, Linn. The bald buzzard, Will. The morphnos, or clanga, Ray & Will. Fishaar, Wires. In Italian, anguista piombina. In Polish, orzelmarlky.

THE SEA-EAGLE.

THIS bird has been called the great sea-eagle. It is indeed nearly as large as the golden eagle; and its body seems proportionally longer, though its wings be shorter. It measures, from the end of the bill to the point of the nails, three feet and an half; but its expanded wings do not reach above seven feet. The sea-eagle is remarkable for its size, and is distinguished: 1. By the colour and figure of its nails, which are of a shining black, and form an entire semicircle. 2. By its legs, which are naked below, and covered with small yellow scales. 3. By the beard of feathers which hangs from the chin, and which has occasioned its receiving the name of bearded eagle. It loves to haunt the sea-shore, and often frequents inland tracts, near lakes, marshes, or rivers that are stocked with fish. It catches the largest of the finny tribe; but it also attacks game, and, as it is large and strong, it seizes and carries off

geese and hares, and even lambs and kids. Aristotle assures us, that the female sea-eagle not only watches her infant brood with the greatest affection, but extends her protection to the young eaglets, which have been expelled by their unfeeling parents, and generally feeds and trains them as if they were her own offspring. The claws of this bird are admirably fitted for the purposes to which nature seems to have destined it; they form an entire semicircle, and are therefore retentive of the slippery prey. It is said by persons who observed the fact, that the sea-eagle catches fish during the night, and the noise of its plunging into the water is heard at a great distance. Salerne also remarks, that when it darts into a pool to seize its prey, the noise it occasions is terrible, especially in the night. This species is found in several parts of Great Britain and Ireland. Mr. Willoughby tells us, that there was an aerie of them in Whinfield-park, Westmoreland; and the bird soaring in the air with a cat in its talons was of this kind. The cat's resistance brought both animals to the ground, when Barlow took them up, as related by Walpole, and afterwards caused the event to be engraved in the 36th plate of his collection of prints. Turner says, that in his days this bird was too well known in England; for it made horrible destruction among the fish. Mr. Martin, speaking of these eagles, says, that they fasten their talons in the back of the fish, commonly of salmon, which are often above the water, or very near the surface. Those of Greenland will even take a young seal out of the water. Turner says, that the fishermen were fond of anointing their baits with the fat of this bird, imagining that it had a peculiar alluring quality: they were even superstitious enough to believe, that whenever the sea-eagle hovered over a piece of water, the fish (as if charmed) would rise to the surface with their bellies upwards; and in that manner present themselves to him. This species is frequent in North America, and was also met with

In Botany Island by Captain Cook. The sea-eagle builds on the loftiest oaks a very broad nest, into which it drops two very large eggs, that are quite round, exceedingly heavy, and of a dirty white colour. Linnæus describes its characters as follows: "Its cere is yellowish, its feet partly woolly, its body ferruginous, the tail-feathers white along the inside." It is sometimes drowned in attempting to catch overgrown fish; not being able to disengage its talons, it is dragged forcibly under water. The Tartars entertain a notion that the wound of its claws is mortal, and therefore they dread its attack.---Synonymes. *L'orfraie*, *Buff.* *Falco ossifragus*, *Lin.* *Aquila ossifraga*, *Briss.* & *Klein.* In Italian, *aquilaastro anguista barbata*. In German, *großer hasenahr*. In Polish, *orzel lomignat*.

THE GALLICUS, OR WHITE JOHN.

THIS species is not found in Britain, but is very common in France, where the peasants give it this name from the whiteness of its belly and under parts of its wings: above, it is of a brownish grey; below, white spotted with brown: the tail feathers on the outside, and at the extremity, are brown; on the inside, white streaked with brown. It commonly nestles on the ground among thickets; frequents cottages and farm-houses, where it plunders the hens and other poultry; it has a slow and heavy flight, and catches its prey rather upon the ground than in the air.

The gallicus, though classed by naturalists among the eagles, seems to have considerable affinity to kites and owls, both in its habit and external form. Like the latter genus, it chases its prey most frequently in the morning and evening, and rests during the middle of the day; although there is no evidence of its incapacity of bearing the strongest light. Like the kite and other predatory birds of the ignoble kind, its wings are short in proportion to the volume of its body; this is particularly observable in the female, whose size is a
third

third larger than that of the male ; hence, the slow and heavy motions which characterise this voracious tribe of thieves, which in France are the scourge of the poultry yards, and are execrated by every good housewife. Thus, in the numerous army of predatory birds, there is no empty space in any of the ranks ; and, in passing along from the eagle and vulture tribes, the transitions to the kites and owls is rendered slight and almost imperceptible by the intervention of this ambiguous corps, whose cunning and voracity amply compensate for its deficiency in swiftness and courage.

The gallicus commonly lays three eagles of pearl grey ; and, during her incubation, the female is abundantly supplied by her mate, who prolongs his attentions till the duty of rearing the family be fully discharged. It is then that the wants of the young give edge to the predatory habits of the parents. Hens, young turkeys, ducks, are then attacked with double fury ; and, where poultry fails, rabbits, partridges, quails, lizards, and frogs, become the indiscriminate victims of these rapacious invaders. The Count de Buffon had one of these birds in confinement ; and it is remarkable that it would never drink when any person was beside it, or was within its sight ; but when it was in a concealed place, it was observed to drink, and to use more precaution than might be expected. A vessel filled with water was left within its reach ; it looked anxiously on every side, to ascertain that it was quite alone ; it then approached the vessel, but still cast an attentive look around : at last, after many hesitations, it plunged its bill up to the eyes in the water, and repeated its draught. It is probable that other birds of prey conceal themselves in the same manner when they want to drink ; the reason probably is, that these birds can take no liquid but by immersing their head beyond the opening of the mandibles, and even as far as the eyes ; in which case, they are thrown off their guard, and have reason to entertain fears : however,

ever, this is the only circumstance in which the white john shewed any mistrust; and in other things he appeared indifferent or rather stupid. He was not at all mischievous, and suffered himself to be handled without discovering resentment.

As the naturalists of England, Germany, and the north of Europe, make no mention of this noxious species, we may conclude that its residence is but local. That genus, the male of which is called the hen harrier, and the female the ringtail, has improperly been confounded with the white john by the English writers. These two families have scarcely any other affinity than their hostility against the poultry yard. Some have called it the white-tailed knight, because it is rather tall. Linnæus gives it the following specific character: "The bill is cinereous: the feet naked and yellowish; the body of a dusky grey, and below (in the male) whitish, with tawny spots."

Synonymes.---Jean le blanc, *Buff. & Lath.* Falco gallicus, *Lin.* Falco hypoleucos, *Decouv. Ruff.* Aquila pygargus, *Briss. Jobnst. Belon.* L'albanella, *Let. uc Sard.* Blanche-queue, *Hist. de Lion.*

THE MALABAR OR PONDICHERY EAGLE.

BRISSON describes this East-Indian bird very accurately, by the name of the Pondicherry eagle. It is only about half the bulk of the common eagle, and resembles the osprey in the colour of the cere, which is bluish; but its feet are not blue as in that bird, nor yellow as in the erne. It is probably the most remarkable bird of prey on the Malabar coast, since the natives make an idol of it, to which they pay adoration; but the beauty of its plumage, rather than its bulk or strength, merits this honour. It is undoubtedly the most elegant of the rapacious tribe. Salerne says, "it is as beautiful as it is rare. Its head, neck, and the whole of its breast, are covered with exceedingly white feathers, longer than broad, the shaft and

edge of which are of a fine jet black. The rest of the body is of a shining chefnut, lighter beneath the wings than above; the six first wing-feathers are black at the end; the cere bluish; the tip of the bill yellow, verging on green; the feet yellow; the nails black. It has a piercing look, and is of the bulk of the falcon. It is a sort of divinity worshipped by the Indians. It occurs also in the kingdom of Visapour, and in the territories of the Great Mogul. This bird is the Pondicherry eagle of Latham, and the falco Ponticerianus of Linnæus. "The cere is sky-coloured; the body chefnut; the head, neck, and breast, white, variegated with dusky lines; the six primary wing-feathers black from their middle to the tips."

THE OROONOKO, OR CROWNED EAGLE.

THIS bird of South America, is described by Marcgrave under the name *urutaurana*, which it receives from the Indians in Brasil, and is mentioned by Fernandes by the name of *ysquauthli*, by which it is called in Mexico. The Antilles are often visited from the continent by this bird, which Du Tertre says must be ranked at the head of the birds of prey in America. "The natives of Tobago have called it the Oroonoko eagle, because it is of the bulk and the figure of an eagle; and because they hold that this bird, which appears only occasionally in the island, frequents the banks of the great river Oronooko. All its plumage is light grey, except the tips of the wings and of the tail, which are edged with yellow. Its eyes are lively and piercing; its wings very long; its flight rapid and speedy, considering the weight of its body. It subsists on other birds, on which it darts with fury, tears them in pieces, and swallows them. It attacks the arras and paroquets. It has been observed, that it never attacks the bird when on the ground, or sitting on a branch, but waits till it rises, and seizes it on the wing." It is somewhat smaller than the common eagle, and resembles

resembles the spotted or roughfooted eagle by the variety of its plumage.

Of the same species is the bird found on the west coast of Africa, of which Edwards gives an excellent description under the name of crowned eagle. "This bird," says Edwards, "is about a third smaller than the largest European eagles, and appears bolder and more intrepid than the others. The bill with the cere, in which the nostrils are placed, is of a dull brown; it is cleft as far as the eyes, and the edges of the mandibles are yellowish at the insertion; the iris is reddish orange; the fore-part of the head, the orbits, and the throat, are covered with white feathers, sprinkled with small black specks; the hind part of the neck and of the head, the back and the wings, are of a deep brown, verging on black; but the outer edges of the feathers are light brown. The quill-feathers are of a deeper colour than the others in the wings; the sides of the wings near the top, and the ends of some of the coverts of the wings, are white; the tail is of a deep grey, intersected with black bars, and the under part appears of a dull ash grey; the breast is of a reddish brown, with large transverse spots on the sides; the belly is white, and also the under part of the tail, which is marked with black spots; the thighs and legs are covered to the nails with white feathers prettily marked with round black spots; the nails are black, and very strong; the toes are covered with scales of a vivid yellow; it erects the feathers on its head like a crown, whence it is named. I drew this bird alive at London in 1752; its owner assured me that it came from the coast of Africa; and I am the more willing to believe it, as I have two others of the same species belonging to another person, and which were brought from Guinea. Barbot mentions this bird by the name of the crowned eagle, in his description of Guinea."--
Edwards's Birds.

The distance between Brasil and Africa, which scarcely exceeds four hundred leagues, is not too great a journey to be performed by a bird of an aërial flight; and therefore it is possible that it may be found on both coasts. The characters are sufficient to decide the identity of the species; both have crests which they can depress at pleasure, and both are nearly of the same size; in both the plumage is variegated, and similarly marked with spots; the iris is of a bright orange; the bill, blackish; the legs covered to the feet with feathers, and marked with black and white; the toes yellow, and the nails brown or black. The crowned eagle of Brasil, the Oroonoko eagle, the Peruvian eagle, the crowned eagle of Guinea, are all considered by Buffon as the same individual. Gmelin ranges this bird with the falcon, and applies the epithet harpyia; Latham calls it the crested-vulture. It is said to cleave a man's skull with one stroke of its bill, and to be as large as a ram. There is a variety of this in New Grenada, which has a black crest, a white belly, thighs spotted white, the tail long, and variegated with white and black. When young it can be tamed. The Linnæan name and character are as follow: *Falco harpia*; its head is crested by the production of the feathers; the body variegated, and white below. It inhabits the hotter parts of America.

THE BRASILIAN EAGLE.

THE bird of Brasil, mentioned by Marcgrave by the name of urubitinga, which is probably a different species from the preceding, since it receives another name in the same country. In fact, it differs, first, by its size, being an half smaller; second, by its colour, being of a blackish brown, instead of a fine grey; third, by its want of erect feathers on the head; fourth, because the under part of its legs and feet are naked, as in the erne, while the preceding is, like the eagle, feathered to the talons.

THE

THE LITTLE AMERICAN EAGLE.

THIS bird is found at Cayenne, and other parts of South America. It is scarcely sixteen or eighteen inches long; and is distinguished at the first glance by a purplish red spot under its neck and throat. It is so small, that we should be inclined to class it with the sparrow-hawks or falcons; but the shape of its bill, which is strait at its insertion, and begins its curve at some distance from the origin, has determined its place among the eagles. This is the red-throated falcon of Latham, the *falco aquilinus* of Gmelin, and the *falco formosus* of Linnæus. Its Linnæan character is, "that its cere, orbit, and feet, are yellowish; its throat purple; its body of a cærulean red; its abdomen flesh-coloured."

THE FISHING EAGLE OF AMERICA.

THIS bird, called the fisher by Father Tertre, is probably the same with Catesby's fishing-hawk of Carolina. It is, says he, of the size of a gos-hawk, but with a longer body; its wings, when closed, stretch a little beyond the extremity of the tail, and when expanded measure more than five feet. Its iris is yellow; its cere blue; its bill black; its feet of a pale blue; its nails black, and almost all of the same length; the upper part of the body, of the wings, and of the tail, is dark brown; all the under parts are white; the feathers on the legs are white, short, and applied close to the skin. "The fisher," says Father Tertre, "is exactly like the *mansfeni*, except that its ventral feathers are white, and those on the crown of the head black; its claws are somewhat smaller. The fisher is a real pirate; it molests not the land-animals, or the birds of the air, but directs its attacks upon the fish alone, which it descries from the top of a branch, or the point of a cliff, and, observing them at the surface of the water, it instantly darts upon them, seizes them

108 NATURAL HISTORY

with its talons, and retires to devour its prey on a rock, Though it does not wage war against the birds, it is pursued by them, and teased and pecked by them, till it is obliged to shift its place. The Indian children breed them when young, and employ them to fish for pleasure merely, for they never give up their seizure." This is the Carolina osprey of Latham, and is a variety of the *falco haliaëtus* of Linnæus. Its tail is of a dusky shade; its crown black, or darkish, variegated with white; the belly white.

THE EAGLE OF THE ANTILLES.

THIS bird, which is called *mansfeni*, is reckoned a species of the rough-footed eagle (*nifus*.) The *mansfeni*, says Father Tertre, is a strong bird of prey, which in its form and plumage bears so great a resemblance to the eagle, that its diminutive size is the only mark of discrimination, for it is scarcely bigger than the falcon, though its claws are twice as large, and stronger. Though thus well-armed, it generally attacks only defenceless birds; as the thrushes and the sea-larks; or, if more adventurous, the ring-doves and turtles: it feeds also on serpents and small lizards. It perches commonly on the most lofty trees: its feathers are so strong, and so compacted, that unless we fire opposite their position, the shot will not penetrate: its flesh is rather black, but yet of a pleasant flavour.

The FALCONS or HAWKS.

HISTORY of FALCONRY.

THIS species of birds, from its connection with our amusements, is of still greater importance than the vulture or the eagle. The falcon, though diminutive in size, is not inferior to the eagle either in courage or generosity, and its subserviency to our pleasure has made it an object of still greater curiosity. The diversions of mankind vary according to their different

different stages of improvement, from a rude to a civilized state. In proportion as population increases, agriculture is improved, and the lands are inclosed. While the pursuer is thus continually retarded below, nothing can stop the object of his pursuit above; hence, those rural sports must decline, in which the game must be pursued over a long extent of country. In certain stages in the progress of nations, the amusement of hawking seems to have been almost universal; and, from the testimony of travellers, birds of this species appear to be common in almost every quarter of the globe. They are taken in great numbers in the islands of the Mediterranean, and upon the coast of Barbary. They abound in the kingdom of Tunis; and among the Arabs, as Dr. Shaw informs us, they constitute the principal amusement of men of rank. They are still more frequent in the empire of the Mogul, and in Persia, where it is alleged that the art of falconry is cultivated above every other. In Japan they are kept as an article of equipage rather than for sport. Kolben mentions the falcons of the Cape of Good Hope, and Bosman those of Guinea. There is no quarter of the ancient continent wherein falcons are not found.

Falconry, although now in a great measure disused, was the principal amusement of our ancestors. A person of rank scarcely stirred out without a hawk on his arm, which, in old paintings, is the criterion of nobility. Harold, afterwards King of England, when he went on a most important embassy into Normandy, is painted embarking with a bird on his hand, and a dog below his arm. "In those days it was thought sufficient for noblemen's sons to wind their horn and carry their hawk fair, and leave study and learning to meaner people." In every country of Europe, this diversion was in such high estimation, that Frederic, one of the emperors of Germany, did not think it below his dignity to write a laborious treatise upon falconry. The history of this amusement would present to the reader a lively

lively image of feudal tyranny and barbarity, were it minutely pursued. Those extensive tracts which each chieftain seized were but thinly inhabited and poorly cultivated; the wild animals that occupied them were his sole property, and the right of killing them his most valued prerogative, and his chief amusement. Before the culinary art was brought to its present perfection, game was almost the only delicacy of the table, and hawking was the principal means by which it could be obtained. Hence, the avidity with which this diversion was pursued; hence too, the multiplied and rigorous penalties by which hawks and game were preserved. In every European kingdom, the complicated system of game laws is the last bulwark that seems to resist the encroachments of freedom. Even in those countries where liberty is established, these laws are permitted to remain a disgrace to legislation and to the liberal ideas of a commercial age.

This amusement, which, among our ancestors, displayed the pride of the rich and the slavery of the poor, was attended with vast expence. In the reign of James I. Sir Thomas Manson is said to have given a thousand pounds for a cast of hawks; an amazing sum, if we consider the value of money in that age. At a period when the people had no rights, and consequently were not respected, we are not to wonder at the rigour of the laws, enacted to preserve a pleasure that was purchased at so extravagant a rate. In the reign of Edward III. it was made felony to steal a hawk; to take its eggs, even on a person's own ground, was punishable with imprisonment for a year and a day, besides a fine at the king's pleasure. In the reign of Queen Elizabeth, the imprisonment was reduced to three months; but the offender was to find security for his good behaviour for seven years, or to lie in prison till he did procure it. "Such," says Pennant, "was the enviable state of the times in England. During the whole day, our gentry were employed with the fowls of the
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the air or the beasts of the field. In the evening, they celebrated their "exploits with the most abandoned and brutish sottishness: at the same time, the inferior ranks of people, by the most unjust and arbitrary laws, were liable to capital punishment, to fines, and the loss of liberty, for destroying the most noxious of the feathered race."

Nothing is more arbitrary, or involved in greater uncertainty, than the classification of hawks. A man's life seems hardly sufficient to acquire a perfect knowledge of all the species and endless varieties which some naturalists pretend to describe of this bird. They are, however, in reality, far less various than the pigeon, or common poultry; because the influence of man upon their nature is less considerable. We neither rear them, nor multiply their species; and, however useful to our pleasures they may be, whatever habits we may give them for that purpose by taming the individual, the species remains always wild. But, as no birds are so liable to change the colours of their feathers the two or three first years of their lives, the number of hawks has been, on this account, multiplied far beyond reality. Another cause of the needless increase of the species of this tribe, has arisen from the various names given to the same birds at different periods of their lives by writers on falconry. The falcon, the falcon gentle, and the haggard, are made distinct species, whereas they form only one. If it is taken in the months of June, July, or August, it is named *gentle*; if after its first moulting, it is termed *baggard*.

Of those falcons anciently trained for the chase, we know only the names. The exact species are so imperfectly described, that one may easily be taken for another. The gyrfalcon, the falcon, the lanner, the sacre, the hobby, the kestrel, and the merlin, are those most commonly in use, both in this country and abroad; and these kinds were formerly mostly natives of *Britain*.

These

These are called the long-winged hawks, to distinguish them from the more ignoble tribes of goshawks, sparrow-hawks, kites, and buzzards, which are too slow, obstinate, or cowardly, to be serviceable in the exercises of the field. These birds are more docile, spirited, and bold, than the rest; they do not come upon their prey in a horizontal direction like the goshawk, but dart, like lightning, perpendicularly upon the devoted victim of their hunger. From the length and shape of their wings, they possess a remarkable velocity. These wings hang down, when closed, as far as the top of the tail; the first feather of each is nearly as long as the second, and terminates in a sharp point. The baser kinds have shorter wings, and the first feather is rounded at the extremity, which is the cause of their slow and heavy motion. If pheasants are to be found, the falcon prefers them to every other kind of prey. His descent upon them is so sudden and unexpected, that he seldom misses his aim. He frequently attacks the kite, either to exercise his courage, or to deprive him of his prey; but he rather insults than injures him. He chases him like a coward; and, though he seldom puts him to death, he beats him about with disdain, apparently despising his flesh as much as he does his manners.

Such are the natural habits of these birds, upon whose education our ancestors bestowed so much pains and assiduous attention, that the art of taming and managing them was the most complicated then known. Many were the volumes and treatises they wrote upon the subject, which, like the diversion itself, are now almost utterly forgotten. Every science, when much cultivated, has a language peculiar to itself, which none but those who are versant in it are capable to understand. The language of falconers was entirely professional: they took a pleasure in the use of technical phrases peculiar to the art, and which, to all but themselves, form a jargon utterly unintelligible. Goldsmith has extracted a specimen of instructions, delivered by Willoughby,

Willoughby, by which the modern reader will perhaps be more amused than edified: He bids us "draw our falcon out of the mew, twenty days before we ensnare her. If she trusts and carry, the remedy is, to cosse her talons, her powse, and petty fingle." In such mysterious and cant phrases did our forefathers wrap their knowledge of a profession, which, in spite of all their efforts, time has rendered unimportant and ridiculous.

It was not to the generous race of falcons alone, that the labours of the falconer were confined: several of the more sluggish and ignoble birds were tamed by those of inferior rank, who could obtain no better. The former, however, were the necessary appendages of all persons of high station, and, from their swiftness and docility, were always considered as most proper for the field. When completely trained, their docility was so remarkable, that they obeyed not only the commands, but the signs, of their master. They remained quietly perched upon his hand till their game was flushed, or else kept hovering round his head, without ever leaving him till he gave them permission. In a wild state, their courage is such, that, like conquerors, in a country they have subdued, they keep all birds in awe and subjection to their prowess. Such as seem to disregard the kite or the sparrow-hawk are seen to fly screaming with terror at their approach, and, like peasants before a victorious army, every one of them hastening to shelter himself. Captivity probably does not exalt their spirit. They are trained, however, in that state to attack birds, which they do not attempt when wild. The young falcon, from his rashness in attacking geese and barnacles, exposes himself at times to a severe chastisement, till he learn from experience to check his temerity in meddling with such unwieldy game.

THE GERFALCON.

THIS bird, after the eagle, is the most noble and generous of all the rapacious tribes. He is distinguished by a yellow wax; the bill bluish, and greatly hooked; the eye dark blue; the throat of a pure white: the whole body, wings, and tail, of the same colour, most elegantly marked with dusky bars, lines, or spots, leaving the white the far prevailing colour. In some, the whole tail is crossed by remote bars of black or brown; in others, they appear only very faintly on the middle feathers: the feathers of the thighs are very long and unspotted: the legs strong and of a light blue. This species is very frequent in Iceland; is found in Lapmark and Norway; but rarely in the Orknies and North Britain. In Asia, it dwells in the highest points of the Urallian and other Siberian mountains, and dares the coldest climates throughout the year. It is kept in the latitude of Petersburg, uninjured in the open air during the severest winters.---This species is pre-eminent in courage as well as beauty, and is the terror of other hawks. It was flown at all kinds of fowl, how great soever they were; but its chief game used to be herons and cranes.

The gerfalcon not only surpasses the rest in size, but he possesses all those distinctive marks which have been observed by the connoisseurs to discriminate the nobler kinds which are capable of education, from the baser and more intractable tribes. The generous birds trained for the purpose of falconry, are distinguished by the length of their wings, which reach commonly to the tip of the tail; the first feather too, of each wing, is nearly of equal length with the second, and instead of being rounded at the end, as in the base kinds, terminates like a lance in a long sharp point. The kites, goshawks, and buzzards, have short rounded wings which render them as unfit for the rapid evolutions of the

the chace, as their intractable dispositions make them incapable of receiving the education necessary for that exercise.

Falconers have recognised three species, or rather varieties, of the gersfalcon; that of Iceland; that of Norway; and the white; all three common in the northern parts of Europe and Asia. As these birds are all found nearly in the same latitudes, and are peculiar to the cold regions, their difference of colour probably is not the effect of climate, nor of age; they may therefore be regarded as constant and distinct families. Their courage renders them a match for the largest birds; and they kill hares, by darting from the air upon them; the female is most frequently employed in these enterprises, being a third larger in size, and much stronger, than the male, who is employed by the falconer against herons and crows, and from the inferiority of his size is called the tiercelet.

These three species are highly esteemed, and have been long preferred by the kings of Denmark; who, send their falconer with two attendants annually into Iceland to purchase them. They are caught by the natives; a certain number of whom in every district are licensed for that purpose. They bring all they take, about midsummer, to Besssted, to meet the royal falconer; and each brings ten or twelve, capped, and perched on a cross pole, which they carry on horseback and rest on the stirrup. The falconer examines the birds, rejects those which are not for his purpose, and gives the seller a written certificate of the qualities of each, which intitles him to receive from the king's receiver-general seventeen rixdollars for the purest white falcon, ten for those which are least white; and seven for the intermediate colour. This brings into the island between 2000 and 3000 rixdollars annually. They are taken in the following manner:---Two posts are fastened in the ground, not remote from their haunts. To one is tied a ptarmigan, a pigeon, a cock

or hen, fastened to a cord, that it may have means of huttering, and so attract the attention of the falcon. On the other post is placed a net, distended on a hoop, about six feet in diameter. Through this post is introduced a string, above 100 yards long, which is fastened to the net, in order to pull it down; and another is fastened to the upper part of the hoop, and goes through the post to which the bait is tied. As soon as the falcon sees the fowl flutter on the ground, he takes a few circles in the air, to see if there is any danger, then darts on its prey with such violence as to strike off the head, as nicely as if it was done with a razor. He then usually rises again, and takes another circle, to explore the place a second time: after which it makes another stoop; when, at the instant of its descending, the man pulls the dead bird under the net; and, by means of the other cord, covers the falcon with the net at the moment it has seized the prey; the person lying concealed behind some stones, or else lies flat on his belly, to elude the sight of the falcon. As soon as one is caught, it is taken gently out of the net, for fear of breaking any of the feathers of the wings or tail; and a cap is placed over its eyes. If any of the tail-feathers are injured, the falconers have the art of grafting others. The Iceland gersfalcons are in the highest esteem. They will last ten or twelve years; whereas those of Norway, and other countries, seldom are fit for sport after two or three years use. Yet the Norwegian hawks were in old times in great repute in this kingdom, and even thought bribes worthy of a king. Geoffry Le Pierre, chief justiciary, gave two good Norway hawks to King John, that Walter Le Madina might have leave to export 100 weight of cheese. John the son of Ordgar gave a Norway hawk to have the king's request to the king of Norway, to let him have his brother's chattels; and Ralf Havoc fined to King Stephen in two gersfalcons or Norway hawks,

hawks, that he might have the same acquittance that his father had.

The following passage from Chardin's travels, seems to refer to the gerfalcon: We must not omit to mention a bird of prey which comes from Muscovy, whence it is transported into Persia, and which is almost as large as an eagle. These birds are rare, and only the king is permitted to keep them. As it is customary in Persia to estimate all the presents without exception that are made to the king, these birds are rated at one hundred tomans a-piece, which answers to one thousand five hundred crowns; and, if any of them die on the road, the ambassador brings the head and the wings to his majesty. It is said that this bird makes its nest in the snow, which it melts to the ground by the heat of its body, sometimes to the depth of a fathom, &c.

Linnaeus makes two species of the Gerfalcon: the first is *Falco Gyrfalco*, or brown Gerfalcon; and is perhaps Buffon's Norwegian Gerfalcon: "Its cere is cerulean, its feet yellowish, its body dusky, with cinereous stripes below, and the sides of the tail white." The second species is the *Falco Candidus*, or white Gerfalcon, and seems to be the same with that of Buffon. Its character is, "That its cere and feet are of a cerulean cast, verging to cinereous, its body white, with dusky spots." And to this belongs a variety, which is the Iceland Gerfalcon, in which the body is dusky, with white spots on the back and wings, and below it is white spotted with black, and the feet are yellow.

THE COMMON FALCON.

OF the common falcons Buffon reckons two species, viz. the *genteel* falcon; and the *passenger*, or *pilgrim*, falcon. The *genteel* falcon drops its feathers in March; the *pilgrim* falcon does not moult until August. It is broader over the shoulders, its eyes are larger and deeper sunk, its bill thicker, its legs longer and better set

218 NATURAL HISTORY

set than in the genteel falcon : those caught in the nest are called *Ninny Falcons* (*Faucons-ninai*) ; when taken too young, they are often noisy and difficult to train. The pilgrim falcons are caught in their passage every year in September on the islands in the sea, and the high beaches by the shore. They are naturally quick and docile, and very easy to train ; they may be flown all May and June ; for they are late in moulting ; but, when it begins, they are soon stripped of their plumage. The pilgrim falcons are caught not only on the coasts of Barbary, but in all the islands of the Mediterranean, and particularly that of Candia, which formerly furnished our best falcons. Forget, formerly director of falconry at Versailles, observes, " that there is no material difference between the falcons of different countries, except in the size ; those which come from the north are commonly larger than those from the mountains, from the Alps, and Pyrenees ; the latter are taken in the nest, the former are caught in their passage in various regions ; they migrate in October and November, and return in February and March. . . . The age of falcons is marked very precisely in the second year, that is, at the first moulting ; but afterwards it is much more difficult to distinguish it. It may however be discovered till the third moulting, not only from the changes of the colour of the plumage, but from the complexion of the feet and cere."

Synonymes. Le faucon, *Buff.* *falco communis*, *Gmel.* & *Briss.* *accipiter fuscus*, *Fris.* *il falcone*, *Cet. uc. Sard.* In German, *Falck* ; in Polish, *Sokol* ; in Spanish, *Halkon*.

THE LANNER FALCON,

THIS species breeds in Iceland ; and was said to be very frequent in France. Mr. Pennant was given a description of one that was caught, while pursuing wild ducks, under the nets. It is known, says Belon, by the blueness of its legs and feet, and by its spots, which



Barlow sculp.

THE COMMON FALCON.

Published as the Act directs, Oct. 1.st 1798.



which are along, and not across the feathers, as in the other hawks. His description is as follows: The lanner, or lanner-falcon, constructs its aerie on the tallest trees of the forests, or on the most elevated rocks. As its dispositions are more flexible than the common falcons, it is used for every purpose. It is less corpulent than the genteel falcon, and its plumage is more beautiful than that of the sacre, especially after moulting; it is also shorter than the other falcons. The falconers prefer the lanner that has a large head and blue-bordered feet; it flies both on rivers and on the plains. It subsists better than any other falcon upon coarse flesh. It is easily distinguished, for its bill and feet are blue; the feathers on the front mottled with black and white, with spots stretching along the feathers, and not transverse as in the falcon. When it spreads its wings, the spots seen from below appear different from those of the other birds of prey; for they are scattered and round like small pieces of money. Its neck is short and thick; as also its bill. The female is called *lanner*, and is much larger than the male, which is named *lanneret*; they are both similar in the colour of their plumage. It remains in the country the whole year, and no bird is so faithful to its favourite haunts." The specific character of the lanner, *Falco Linarius*, Linn. is, that, its cere is yellowish, its feet and bill coerulean, its body marked beneath with black longitudinal spots." It inhabits Europe, but is not common in England; it is frequent in Iceland, the Feroe islands and Sweden, in the Uralian chain and other parts of Tartary, though not found in the east and north of Siberia. It breeds in trees, and is smaller than the buzzard. Its name is derived from *laniare*, to tear; because this bird cruelly mangles the poultry and other victims of its rapine.

Synonymes.---Le lanier, *Buff.* falco laniarius, *Linn.* *Gmel.* *Ray.* *Briss.* *Klein.* &c. Lanneret, *Alb.* In German, swimer, or schmeymer. In Italian, laniero.

THE

THE SACRE.

LIKE the lanner, the feet and bill of the sacre are blue; while those of the falcons are yellow. This character, which appears specific, would incline us to conclude that the sacre is but a variety of the lanner; but they differ widely in their size and the colour of their plumage, and seem rather to be two distinct though proximate kinds. It is somewhat singular that Belon is the only one who has noticed the distinguishing marks of this bird, and, without his assistance, naturalists would be scarcely, if at all, acquainted with the sacre and the lanner. Both have become very rare, and it is probable that their instincts are the same, and consequently that they are kindred tribes. The plumage of the sacre is inferior in beauty to that of the other birds of falconry; being of a dirty ferruginous colour, like that of the kite. It is low, its legs and toes blue, in some degree similar to the lanner. It would be equal to the falcon in bulk, were it not more compact and rounder shaped. It is a bird of intrepid courage, and comparable in strength to the pilgrim falcon; it is also a bird of passage, and it is rare to find a man who can boast that he has ever seen the place where it breeds. Some falconers are of opinion that it is a native of Tartary and Russia, and towards the Caspian Sea; that it migrates towards the south, where it lives part of the year; and that it is caught by the falconers who watch its passage in the islands of the Archipelago, Rhodes, Cyprus, &c. And, as the sacre can be made to soar after the kite, it can also be trained for rural sport, to catch wild geese, bustards, olives, pheasants, partridges, and every sort of game. The *sacret* is the male, and the *sacre* the female; the only difference between which consists in size.

The specific character of the sacre, *falco-sacer*, Linn. is, "That its cere and feet are cœrulean; the back, breast, and converts of the wings, mottled with dusky; the

the feathers of the tail marked with kidney-shaped spots." It inhabits Europe and Tartary. It is two feet long, and weighs two pounds eight ounces. Its feet are feathered almost to the toes. To the same species belongs a variety, the *American sacre* or *speckled partridge hawk*. "Its cere and feet are cœrulean; its body, and the wing and tail feathers, marked with dusky pale bars; the head, breast, and abdomen, stained with dusky white longitudinal spots." It is a native of Hudson's-bay and other parts of North America. It preys on the white grouse, and will even seize them while the fowler is driving them into his nets. It breeds in April or May in unfrequented places; and has, it is said, only two eggs. It is about the bulk of a crow.

Synonymes.---Le sacre, *Buff. falco sacer*, *Gmel.* *Briss. Will. Klein, &c.* In German, facker. In Italian, sacro.

THE BLACK FALCON.

THE black falcon is a bird of passage at Malta, in France, and in Germany, which Frisch and Edwards have accurately figured and described. The bill is of dark lead colour; the eyes dark and brilliant, over which is a streak of orange-red; the upper part of the head, neck, back, wings, and tail, are of a dark or dusky colour; the tips of the covert feathers of the wings and tail are of a russet brown; the ridge of the wing on the upper part is white, and within-side is marked with transverse bars of black and clay colour; the legs and feet are of a greenish yellow, inclining downwards to a dirty blue; the claws strong and black. It is a native of Hudson's-bay, and migrates in the summer months.

THE RED FALCON.

THIS is the *falco rubens indicus* of Aldrovandus, who describes it accurately, and nearly as follows:---

Vol. IV. No. 52.

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In the female, which is a third larger than the male, the upper part of the head is broad, and almost flat: the colour of the head, neck, all the back and the upper part of the wings, is ash, verging on brown; the bill is very thick, though the hook is rather small; the base of the bill is yellow, and the rest, as far as the hook, is cinereous; the pupil of the eyes is very black, the iris brown, the whole of the breast, the higher part of the upper surface of the wings, the belly, the rump, and the thighs, are orange inclined to red; above the breast and below the chin there is a long cinereous spot, and several small spots of the same colour on the breast; the tail is radiated with semicircular bars, alternately brown and ash-coloured; the legs and feet are yellow, and the nails black. In the male, all the parts which are red have a richer colour; those which are cinereous have more brown; the bill is bluer, and the feet more yellow. The red falcon is often found in flat situations, and in marshes; it is bold, but difficult to controul.

THE INDIAN FALCON.

THIS bird is black on all the upper part of the head and body, shining with a blue and purplish gloss; but the breast and belly, from the bill to the tail, is a beautiful bright orange colour, lighter on the breast than in other parts; its thighs are brawny, its legs thick and short, and its toes armed with very strong talons, little inferior to those of the eagle. These falcons are endowed with great courage and sagacity, and are in high request throughout the Mogul empire, in Persia, and other parts of Asia. The Persians are expert in training birds for the chase; and they generally instruct the falcons to fly at all sorts of birds; and for this purpose they take cranes and other birds, and, putting out their eyes, they set them at liberty, and immediately let loose the falcon, which easily catches them. They have also falcons for the chase of antelopes,



The Indian Falcon.

Published June 1 1708.

Pass saulp.



lopes, which are trained in the following manner: They make the falcons constantly eat off the nose of stuffed antelopes, and suffer them to feed nowhere else. After the birds are thus bred, they carry them into the fields, and, when they discover an antelope, they let loose two of them, one of which fastens on the face of the beast, and strikes it before with the feet. The antelope stops short, and endeavours to shake off the falcon, which claps its wings to keep its hold, and thus retards the flight of the antelope. When after much struggling the falcon is disengaged, another succeeds; and thus the antelope is continually harassed and detained, until the dogs have time to overtake him. These sports are the more pleasant as the country is flat and open, and little interrupted by wood. *Relation de Thevenot.* The way in which the Persians breed the falcons to the chase of wild deer is, to skin one and stuff it with straw, and to fasten the flesh with which they feed falcons always on the head of the stuffed animal, which is moved along on a four-wheeled vehicle in order to accustom the bird. If the beast is large, they fly several birds at it, which tease it one after another. They also use these birds in rivers and marshes, into which they enter like dogs to hunt for the game. As all the military people are sportsmen, they usually carry at the pommel of the saddle a small tymbal of eight or nine inches in diameter, and by striking it they recal the bird. *Voyage de Chardin.* Persia has falcons, sparrow-hawks, and lanners, with which the royal venery is provided, amounting to more than eight hundred. Some are flown at the wild boar and the wild ass; others are intended against cranes, herons, geese, and partridges. A great part of these birds of sport are brought from Russia; but the largest and best come from the mountains which stretch towards the south from Schyras unto the Gulph of Persia. *Dampier's voyage.* The Persians, who have much perseverance, also take pleasure in training a

crow in the same way as the sparrow-hawk. *Dampier's voyage*. Many falcons of different species have even been sent from Mexico and Peru to the grandees of Spain, as they are highly valued. The bird which the Mexicans call *botli*, mentioned by Fernandez, appears to be the same with the black falcon, above described.

THE FISHER FALCON.

THIS bird is called *Tamas*, by the negroes of Senegal; and is described by Adanson, under the name of *fisher-falcon*. It resembles the common falcon almost entirely in the colours of its plumage; it is, however, rather smaller, and has on its head long erect feathers, which are reflected back, and form a sort of crest that distinguishes it from all others of the same genus. Its bill is yellow, not so much curved, and thicker than that of the common falcon, and its mandibles have considerable indentations. Its instinct is also different; for it fishes rather than hunts. This appears to be the species which Dampier mentions by the name of *fisher-falcon*. "It resembles," he says, "in colour and figure our smaller sorts of falcons; and its bill and talons are shaped the same. It perches upon the dry branches and trunks of trees that grow by the sides of creeks, rivers, or near the sea-shore. When they observe little fish near them, they skim along the surface of the water, seize them with their talons, and hurry them into the air without wetting their wings." He adds, that they do not swallow the fish entire; like other birds that subsist on that prey, but tear it with their bill, and eat it by morsels." This is the *falco piscator* of Gmelin and Latham. The specific character: "It is half-crested, the head ferruginous, the body cinereous, the quills have a dusky margin, the under side of the body pale yellowish, with dusky longitudinal spots."

THE

THE KITE.

THIS bird is easily distinguished from the other sluggish and rapacious kinds, by his forked tail and his slow floating motion. He is never at rest; to him flying seems both natural and easy; and he may be said to spend his life in the air. The manner in which he plies his wings, has often been admired. They are at times altogether without motion; and it is by his tail alone that he directs his evolutions. He raises himself without effort, and descends as if he were sliding along an inclined plane. He slackens, then quickens his movement, again stops his flight, and hangs as if motionless in the bosom of the air for hours together. With all this apparent ease in flying, he seldom chases; for there is hardly any bird that cannot make good his retreat against him. "He may therefore be considered as an invidious thief, who prowls about, and when he finds a small bird wounded, or a young chicken strayed too far from the mother, instantly seizes the hour of calamity, and, like a famished glutton, is sure to shew no mercy." Notwithstanding its ignoble manners, the French call it the *royal kite*; because it was formerly an amusement for princes to hunt this cowardly bird with the falcon or the sparrow-hawk. It is indeed entertaining to see it, though possessed of all that ought to inspire courage, and deficient neither in weapons, strength, nor agility, decline the combat, and fly before a sparrow-hawk smaller than itself; it constantly circles, and rises, as it were, to conceal itself in the clouds, and, when overtaken, suffers itself to be beaten without resistance, and brought to the ground, not wounded, but vanquished, and rather overcome with fear than subdued by the force of its antagonist.

Though the body of the kite is comparatively small, its wings extend near five feet; the cere, the iris, and the feet, are yellow; the bill is of a horn colour, blackish
towards

towards the point, and the nails are black; its sight is as keen as its flight is rapid; sometimes it soars so high in the air as to be beyond the reach of our view, and yet at this immense distance it distinctly perceives its food, and descends upon whatever it can devour or ravage without resistance; its attacks are confined to the smallest animals and the feeblest birds; it is particularly fond of young chickens, but the fury of the mother is sufficient to repel the robber. It is not a bird of passage, for it constructs its nest in these countries, and breeds in the hollow of rocks. The female lays two or three eggs, which are whitish with pale yellow spots, and, like those of all the carnivorous birds, are rounder than hen's eggs. Some authors have said that they build their nests in the forests, upon old oaks or firs; but they are mostly found in the holes of rocks.

This species seems to be scattered through the whole extent of the ancient continent, from Sweden to Senegal; and is the only one which regularly inhabits this country. It is the *falco fulvus* of Linnæus, and the kite or glead of Willoughby. In German it is named *waike*, *weisser milan*, (*white kite*), and *bungeyer* (*hen-vulture*): in Dutch, *wowe*: in Italian, *milvo*, *nibbio*, *poyana*. The ancient Greeks called it *ἰεῖς*, a word which is also employed to denote a sort of hare. (Buffon supposes, probably from an oversight, the term to be *ἰεῖς*, which signifies a polecat, and imagines that it was applied to the kites, because poultry is the common prey of both.) The Romans named it *milvius*, i. e. *mollis avis*, indolent bird. The Swedish, *glada*, and the old English named *gleade*, refers to its gliding motion.

The American kite is said to be a native of Peru, and appears in Carolina only in summer. In some respects it resembles our kite, and has like it a forked tail. Catesby gives a description of it under the name of *swallow-tailed-falcon*, and Brisson terms it the *carolina kite*.

kite. It is the *falco furcatus* of Linnæus, the *great peruvian swallow* of Feuillé, and the *forked-tail peruvian falcon* of Klein. The specific character: "The cere is dull coloured, the feet yellowish, the body dusky above and whitish below, its tail very long and forked." It inhabits Carolina and Peru, lives upon insects and serpents, and is migratory. It is rather smaller than our kite, but of the same length. The *irides* are red, the head and neck snowy, the back dusky or black, shining with purple or green.

There is another species called the *black kite*. Aristotle distinguishes this from the preceding, which he names simply *kite*, and gives it the epithet of *Ætolian*, because, in his time, it was probably most common in *Ætolia*. Kites for the most part lay only two eggs, sometimes three; but this species lays four. It is the *falco ater* of Gmelin, the *schwarzer milan* and the *brauner mald geyer* of the Germans, and the *black kite* of Sibbald and Latham. "Its cere and feet are yellow, its body dusky-black above, whitish on the head and the under part of the body; its tail forked." It is smaller than the common kite, its tail slightly forked, its legs slender; its egg is ferruginous, with dusky and black spots. They are migratory; before the approach of winter, they traverse the Black-sea, marshalled in numerous lines, and return in the same order about the beginning of April: they remain the whole winter in Egypt, and are so tame, that they enter the cities, and alight upon the windows of the houses; their sight is so quick, and their flight so steady, that they catch in the air the bits of meat that are thrown to them.

THE BUZZARD.

THE buzzard is so common and so well known, that it requires but little description. Its length is twenty or twenty-one inches; its alar extent four feet and an half; its tail is only eight inches, and the wings,

128 NATURAL HISTORY

wings, when closed, reach a little beyond its point; the iris is of a pale yellow, and almost whitish; the cere and feet are yellow, and the nails black. This bird resides the whole year in our forests; it appears stupid, whether in the domestic state or in that of liberty; it is sedentary, and even indolent; it often continues for several hours together perched upon the same tree; its nest is constructed with small branches lined in the inside with wool, and other soft light materials; it lays two or three eggs, which are whitish, spotted with yellow. It feeds and tends its young longer than the other birds of prey, most of which expel their brood before they are able to provide with ease for themselves. Ray affirms, that if the mother happen to be killed in the time of her tender charge, the male buzzard patiently discharges the trust.

This bird of rapine does not seize its prey on the wing; it sits on a tree, a bush, or a hillock, and darts upon the humble game that comes within its reach. It catches young hares and young rabbits, as well as partridges and quails; it commits havoc upon the nests of most birds; and, when more generous subsistence is scanty, it subsists upon frogs, lizards, serpents, and grass-hoppers. This species is subject to great variety, so that, if we compare five or six common buzzards together, we shall scarcely find two that are alike. Some are entirely white; in others, the head only is white; others again are mottled with brown and white. These differences are owing chiefly to the age and sex, for they are all found in our climate. The specific character of the buzzard: "Its cere and feet are yellowish, the body dusky, the abdomen pale, with dirty spots, the tail streaked with dusky colours." Synonymes.---La buse, *Buff.* *falco buteo*, *Linn.* goiran, *Hist. de Lyons.* maasse geyer, *Gunth.* pojaha secunda, *Zinn.* In Italian, it is called *buzza* or *bucciara*. The Latin name is *buteo*; the Greek





The Buzzard.

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Greek Τριόχης, probably from the notion that it had three testicles, Τριές and ορχίς.

THE HONEY BUZZARD.

AS the honey buzzard differs but little from the common buzzard, they have been distinguished by those only who have carefully compared them. They have indeed more analogous than discriminating characters, but the difference of external appearance and of natural habits, is sufficient to constitute two species; which, though allied, are yet separate and independent. The honey buzzard weighs near two pounds; its length from the point of the bill to the end of the tail is twenty-two inches; its wings extend four feet two inches, and when closed reach to three-fourths of the tail: its bill is rather longer than that of the buzzard; the cere is yellow, thick, and unequal; its nostrils are long and curved; when the bill opens, the mouth appears very large and of a yellow colour; the iris is of a bright yellow; the legs and feet are of the same colour, and the nails, which are not much hooked, are strong and blackish; the head is large and flat, and of a grey cinereous. A full description of this bird occurs in the work of Brisson and in that of Albin; the last author, after describing the external parts of the honey buzzard, says, that its intestines are shorter than in the common buzzard; and he adds, that there are found in the stomach of the honey buzzard several green caterpillars, as also some common caterpillars and other insects. These birds build their nests with small sticks, and line them with wool; their eggs are of an ashi-colour, and marked with small brown spots. Sometimes they take possession of the nests of other birds. They feed their young with crysalids, and particularly with those of wasps. The heads and different portions of wasps are frequently covered in their nest. When young, they are covered with a white down, spotted with black; the feet are

of a pale yellow, and the cere white. In the stomach of these birds, which is very large, there are also found entire frogs and lizards. The female is larger than the male, and both trip and run, without the assistance of their wings, as fast as our domestic poultry.

The honey buzzard generally sits upon low trees to spy its prey. It catches field mice, frogs, lizards, caterpillars, and other insects. It scarcely flies but from tree to tree, or from bush to bush, always low; nor does it soar like the kite, which it resembles by its instincts, but from which it can be readily distinguished by its motions and the shape of its tail. It is common to place snares for the honey buzzard, because in winter it is very fat and delicate to eat. It is particularly fond of the comb of bees and wasps, with which it is particularly sedulous to feed its young. From its attachment to this food, its distinctive name is said to have been first given. Synonymes.---La bondrée, *Buff.* *falco apivorus*, *Linn.* *pojana*, *Zinn.*

THE SAINT MARTIN, OR HEN-HARRIER.

THIS bird is rather larger than the common crow, and its body is proportionally more delicate and flexible. Its legs are long and slender; whereas those of the falcon are robust and short. The only analogy which subsists between it and the falcon, is founded in the habit of tearing with its bill all the small animals which it catches, and in not swallowing them entire like the other large birds of prey.

This species is common in France, as well as Germany and England. Edwards says, that the specimen from which his description is given, was killed near London; and he adds, that it was observed to flutter about the foot of some old trees, and sometimes to strike the trunks with its bill and claws; and that the reason of the motion could not be perceived till after its death, when, the body being opened, there were
found

found in its stomach twenty small lizards, torn or cut into two or three portions.

When we compare this bird with what Belon says of his *second* faint martin, we cannot doubt of their identity; and besides the resemblance in point of size, shape, and colour, their natural habits of flying low, and searching eagerly and incessantly for small reptiles, belong not so much to the falcons and other noble birds, as to the buzzard, the harpy, and others which partake of the groveling manners of the kites. Synonymes.--- L'Oiseau faint martin, *Buff.* and *Bel.* *falco cyaneus*, *Linn.* *falco torquatus* (mas.) *Briss.* *pyargus accipiter* (mas.) *Ray* and *Will.* *falco albanella*, *Gerin.* *lanarius cinereus*, *Fris.* *falco plumbeus cauda tessellata*, *Klein.* hen harrier, *Penn. Edw. Will. Alb.* and *Lath.*

THE SOUBUSE, OR RING-TAIL.

THIS bird resembles the faint martin in its instincts and habits; both fly low to catch field-mice and reptiles; both enter the outer court, and haunt the places where poultry is kept, to seize young pigeons and chickens; both are ignoble birds, which attack only the weak and feeble. The male, as in other rapacious birds, is much smaller than the female, and is besides distinguished by the want of a collar, that is of small feathers bristled round the neck. Both this and the preceding article are involved in obscurity, arising from the opposite opinion of naturalists; some maintaining that the former is only the male of the latter, while others consider them as of different species. The faint martin, or hen-harrier (*falco cyaneus*, *Linn.*) is thus characterised: "Its cere is white; its feet tawny; its body of a hoary cœrulean, and a white arch above the eyes encircling the gullet." The soubuse or ring-tail (*falco pygargus*, *Linn.*): "Its cere and feet are yellow; its body cinereous; its lower-belly palish, with rufous oblong spots; its orbits white."

Pennant considers them only as the male and female, and describes them as follows :

“ The male, or the hen-harrier, weighs about twelve ounces ; the length is seventeen inches ; the breadth three feet three inches ; the bill is black ; cere, irides, and the edges of the eye-lids, yellow ; the head, neck, and coverts of the wings, are of a bluish grey ; the back of the head white, spotted with a pale brown ; the breast, belly, and thighs, are white ; the former marked with a few small dusky streaks : the scapular feathers are of a deep grey, inclining to dusky ; the two middle feathers of the tail are entirely grey ; the others only on their exterior webs ; the interior being white, marked with some dusky bars ; the legs are yellow, long, and slender.

“ The female weighs sixteen ounces ; is twenty inches long ; and three feet nine inches broad : on the hind part of the head, round the ears to the chin, is a wreath of short stiff feathers of a dusky hue, tipped with a reddish white ; on the top of the head and the cheeks the feathers are dusky, bordered with rust colour ; under each eye is a white spot ; the back is dusky ; the rump white, with oblong yellowish spots on each shaft ; the tail is long, and marked with alternate bars of dusky and tawny, of which the dusky bars are the broadest ; the breast and belly are of a yellowish brown, with a cast of red, and marked with oblong dusky spots.”

Synonymes.---*La soubuse, Buff. Falco pygargus, Linn. Falco torquatus (fem.) Briss. Ring-tail, Penn. Alb. Will. Latb. &c.*

THE HARPY.

THIS bird is called by some naturalists the *red harpy*, and by others the *red buzzard*. Its habits are nearly the same with those of the two birds which we have described in the two preceding articles. It catches fish, and draws them alive out of the water. It seems,
says

says Frisch, to have a more acute sight than any of the other birds of rapine, its eye-brows being more projected. It is found both in France and in Germany, and loves to haunt the sides of rivers and pools. It is distinguished by "its yellow feet, its rufous body variegated with longitudinal spots, its back being dusky, and the feathers of the tail cinereous." The irides are saffron-coloured. Its length is twenty inches.

Synonymes.---La harpays, *Buff.* *circus rufus*, *Gmel.* fisch-geyer, brand-geyer, *Frisch.* harpy falcon, *Lath.*

THE MOOR BUZZARD.

THIS bird was formerly called the *bastard partridge*, and some falconers term it the *white-beaded harpy*. It is more voracious and less sluggish than the common buzzard; and this is perhaps the only reason that it appears more vicious. It commits dreadful havock among the rabbits, and is equally destructive to the fish as to the game. Instead of haunting, like the common buzzard, the mountain-forests, it lodges only in the bushes, the hedges, and rushes near pools, marshes, and rivers that abound with fish. It builds its nest at a small height above the surface of the ground in the bushes, or even in hillocks covered with thick herbage. It lays three eggs, sometimes four; and though it appears to be more prolific than the common buzzard, and, like it, a stationary bird, it is however more rare, or at least more difficult to be found.

Though the moor buzzard resembles the black kite in many respects, we must take care not to confound them; for the moor buzzard has a short thick neck; whereas the kite has a much larger one. And the moor buzzard is distinguished from the common, first, by the places it haunts; secondly, by its flight, which is more rapid and steady; thirdly, because it never perches upon large trees, but rests upon the ground, or in the bushes; fourthly, by the length of its legs, which,

134 NATURAL HISTORY

which, like those of the hen-harrier and ringtail, are proportionally taller and slenderer than those of the other birds of rapine.

The moor buzzard prefers water-fowl; as divers, ducks, &c. It preys on sedge-birds, and catches fish alive, and transports them in its talons; and, when nobler prey fails, it feeds upon reptiles, toads, frogs, and aquatic insects. Though smaller than the common buzzard, it procures a more plentiful subsistence; probably because it is more active and vigorous in its movements, and has a keener appetite: it is also more courageous. Belon asserts, that he has seen it trained to hunt and catch rabbits, partridges and quails. It flies more heavily than the kites; and, when it is pursued by the falcons, it does not rise into the air, but flies in a horizontal direction. A single falcon is not able to get the better of it; like the kite, it meets its antagonist, but makes a more vigorous and bold defence. The hobbies and the kestrels are afraid of it, decline the conflict, and even fly its approach.

Synonymes.--Le busard, *Buff.* *falco æruginosus*, *Linn. Gmel.* *Ray*, *Will.* *Klein*, and *Frisch.* *falco boëticus*, *Gerrin.* *faux perdrieux*, *Belon.* *il bozzargo*, *Cet.* *il nibbio*, *Zinn.* The Greek name is *Κίρκος*, whence the Latin *circus*. In French it is commonly termed the *marsh busard*; but, as in that country there exists only one species of it, Buffon preserves the simple name of *busard*. "Its cere is greenish; its body grey; its crown, throat, *axillæ*, and feet, are yellowish." It varies extremely in regard to colour: in some the body is ferruginous, and the crown alone yellowish; in some it is dusky ferruginous, and the crown and throat yellowish; in a few instances the whole bird is of and uniform dusky ferruginous. The egg is whitish with dirty spots, sprinkled with some dusky spots.

THE CARACARA.

THIS bird is called by the Indians of Brazil *cara-cara*,

caracara, and Marcgrave gives a figure and a short description; he says, that the *caracara* of Brazil, named *gavion* by the Portuguese, is a kind of sparrow-hawk, or small eagle, of the size of a kite; that its tail measures nine inches, its wings fourteen, and reach not so far as the end of the tail; the plumage rusty, and spotted with white and yellow points; the tail variegated with white and brown; the head similar to that of the sparrow-hawk; the bill black, hooked, and moderately large; the feet yellow, the claws like those of the sparrow-hawk, with nails that are semilunar, long, black, and very sharp; the eyes of a fine yellow. He adds, that this bird is very destructive to poultry, and that it admits of a considerable variety, some individuals having the breast and belly white.

THE ASH-COLOURED BUZZARD.

THIS bird is found in the tracts contiguous to Hudson's-bay, and which Edwards describes in the following words: This bird is of the bulk of a middle-sized hen; it resembles the common buzzard in its shape and the disposition of its colours; the bill and the cere are of a bluish leaden-colour; the head and the upper part of the neck are covered with white feathers, spotted with deep brown in the middle; the breast is white, like the head, but it is mottled with larger brown spots; the belly and sides are covered with brown feathers, marked with white round or oval spots; the legs are clothed with soft white feathers, speckled irregularly with brown; the coverts of the under part of the tail are radiated transversely with black and white; all the upper parts of the neck, of the back, of the wings, and of the tail, are covered with feathers of a brown cinereous colour, deeper in the middle, and lighter near the edges; the coverts of the lower parts of the wings are of a dark brown, with white spots; the feathers of the tail are barred above with narrow lines of an obscure colour,

and barred below with white lines; the legs and feet are cinereous bluish; the nails are black, and the legs are covered half their length with feathers of a dull colour. Edward adds, that this bird preys chiefly upon the white grouse. After comparing it, as thus described, with the common buzzards, the ringtails, the harpies, and the moor-buzzards, it appears to differ from them all, by the shape of its body, and the shortness of its legs. It has the port of the eagle; its legs are short like those of the falcon, and blue like those of the lanner.

THE SPARROW-HAWK.

THE sparrow-hawk continues the whole year in our climate; and are numerous. They are nearly the size of a magpie. The female is much larger than the male; she builds her nest on the loftiest trees of the forest, and generally lays four or five eggs, which are spotted with a yellow reddish near the ends. The sparrow-hawk is docile, and can be easily trained to hunt partridges and quails; it also catches pigeons that stray from their flock, and commits prodigious devastation on the chaffinches, and other small birds which troop together in winter. It is probable that the sparrow-hawk is more numerous than we suppose; for it appears at certain seasons to migrate in immense bodies to other countries; and the species is found scattered in the ancient continent, from Sweden to the Cape of Good Hope. Belon, to prove the migration of these birds, says, "We were at the mouth of the Pontus Euxinus, where begins the strait of the Propontis: we ascended the highest mountain, and found a bird-catcher very successfully employed; and, as it was about the end of April, when no birds can build their nests, we thought it strange that so many kites and sparrow-hawks should flock thither. The bird-catcher was very assiduous, and scarcely allowed one to escape; he caught more than a dozen in an hour. He

was

was concealed behind a bush, and in front, about two or three paces distant, he had constructed a close square airy measuring two paces; round it were fixed six staves, three on each side, an inch thick, and about a man's height, and on the top of each a notch was cut; a very fine green net was fastened to these notches, and spread a man's height from the ground; in the middle of the space was a stake of a cubit high, and to the top of which was attached a cord that led to the person concealed behind the bush; to this cord several birds were fastened, and fed on grain within the airy. When the bird-catcher perceived the sparrow-hawk advancing from the sea, he scared these birds; and the sparrow-hawk, whose sight is so keen as to descry them at the distance of half a league, shot with expanded wings to seize his prey, and in the eagerness and rapidity of his motion was entangled in the net. The person then took the bird, and slipped it into a linen bandage ready sewed, which confined the wings, thighs, and the tail, and threw it upon the ground, where it could not stir. We could not conceive whence the sparrow-hawks came, for, during the two hours that we staid, more than thirty were caught; so that in a day one man might catch above a hundred. The kites and sparrow-hawks arrived in a chain that extended as far as the eye could reach." Belon, *Hist. Nat. des Oiseaux*.

The specific character of the sparrow hawk, *falco nisus*, Linn. is "That its cere is greenish; its feet yellow; the abdomen white, waved with grey, and blackish streaks on the tail." There are two varieties belonging to it. First, The spotted sparrow-hawk. Its back is earthy-coloured, sprinkled with white spots; the under part of the body is squamous, and more deeply stained; the under surface of the wings and of the tail is varied with broad white zones, and dirty narrow stripes. Secondly, the white sparrow-hawk, which has been killed in England.

Synonymes.---L'Epervier, *Buff.* falco nifus, *Linn* accipiter, *Briff.* accipiter fringillarius, *Ray*, *Will.* and *Klein.* nifus striatus, sagittatus, *Fris.* lo sparviero, *Cett.* sperver, *Gunth.* The Greek epithet is *Σπιζας*, *fringillarius*; and the Latin appellation, *accipiter fringillarius*, because it preys upon chaffinches (*fringilla*) and other small birds.

THE GOS-HAWK.

THE gos-hawk is a beautiful bird, much larger than the sparrow-hawk, which it however resembles by its instincts. Before it has shed its feathers, that is, in its first year, it is marked on the breast and belly with longitudinal brown spots ranged vertically; but, after it has had two moultings, these disappear, and their place is occupied by transverse bars, which continue during the rest of its life. Hence we are apt to be deceived with respect to this bird, from the change that happens in the disposition of the colours of the plumage. The male is much smaller than the female: both are trained to the chase, and are carried on the hand, and not used as decoys; they soar not so high as those whose wings are longer in proportion to their body; they have many habits in common with the sparrow-hawk, yet they do not dart directly downwards upon their prey, but catch it by a side shoot. It appears by Belon's account that the gos-hawk can be ensnared by a contrivance similar to what is practised against the sparrow-hawk. A white pigeon, which can be perceived at a great distance, is placed between four nets, nine or ten feet high, inclosing a space of nine or ten feet each way round the pigeon, which is in the centre: the gos-hawk descends obliquely, pushes the net to reach his prize, and, though entangled, he devours it, and till fated makes few attempts to escape.

The gos-hawk abounds most in Germany; and the species seems to penetrate into the countries of the

north as far as Sweden, and advances in those of the east and south to Persia and Barbary. Those bred in Greece are, according to Belon, the best for falconry. "They have," says he, "a large head, a thick neck, and much plumage. Those of Armenia," he adds, "have green eyes; in those of Persia, they are light-coloured, hollow and sunk; in those of Africa, which are less esteemed, they are at first black, and after moulting, become red." But this character is not peculiar to the gos-hawks of Africa; those of our own climate have eyes which assume a deeper red as they advance in age.

M. Buffon kept for a long time a male and female of the brown gos-hawk: the female was at least a third larger than the male, and its wings, when closed, did not reach within six inches of the end of the tail. During the first five or six weeks, these birds were of a grey white; the back, the neck, and the wings, became gradually brown; the belly and the under-part of the throat did not change so much, and were generally white or yellowish white, with longitudinal brown spots the first year, and transverse brown bars the following years. The bill is of a dirty blue, and the cere of a leaden colour; the legs are featherless, and the toes of a deep yellow; the nails are blackish, and the feathers of the tail, which are brown, are marked with very broad bars of a dull grey colour. During the first year, the feathers under the throat are in the male mottled with a reddish colour, by which circumstance it differs from the female; though, if we except the size, it closely resembles it in other respects. It was observed, that though the male was much smaller than the female, it was fiercer and more vicious; they were both difficult to tame; they fought often, but rather with their claws than with their bill, which they seldom employ but to tear the birds or other small animals that they want to catch; they turn upon their back and defend themselves with their spread talons. Though
confined

confined in the same cage, they were never perceived to contract the least affection for each other. They continued together a whole summer, from the beginning of May to the end of November, when the female in a violent fit of rage murdered her mate, at nine or ten o'clock in the evening, when the silence of night had soothed the rest of the feathered race in profound repose. Their dispositions are so bloody, that, if a gos-hawk be left with several falcons, it destroys them all, one after another. It appears, however, to prefer the common and field mice and small birds, and eagerly devours raw flesh, but constantly declines meat that has been cooked; however, by long fasting, it can be brought to overcome this natural aversion. It plucks the birds very neatly, and tear them into pieces before it feeds; but it swallows the mice entire.

The gos-hawk was formerly in high esteem among falconers, being flown at cranes, geese, pheasants, and partridges. It breeds in France and in Scotland, as well as in the countries before-mentioned; and builds its nest in trees. It is very destructive to game, and dashes through the woods after its quarry with vast impetuosity; but, if it cannot catch the object of its pursuit almost immediately, it desists, and perches on a bough till some new game presents itself. This species is also common in Muscovy and Siberia. They extend to the river Amur; and are used by the Emperor of China in his sporting progresses attended by his grand falconer, and 1000 of the subordinate. Every bird has a silver plate fastened to its foot, with the name of the falconer who had the charge of it; that, in case it should be lost, it might be brought to the proper person: but, if he cannot be found, the bird is delivered to another officer, called the *guardian of lost birds*; who keeps it till it is demanded by the falconer to whom it belonged. That this great officer may the more readily be found among the army of hunters who attend the emperor, he erects a standard in the most conspicuous place. The specific

specific character of the gos-hawk (*Falco palumbarius*, Linn.) is, "That its cere is black, the margin and feet yellow, the body dusky, the tail feathers marked with pale bars, the eye-brows white." It is larger than the common buzzard, being one foot ten inches long, but is of a slender and more elegant shape. It is found in Europe, Asia, and America.

Synonymes.---L'Autour, *Buff.* *Falco palumbarius*, Linn. *Gmel. Will. Klein, &c.* Astur, *Briss.* Grosse gepfeilter falck, *Frisch.* In Italian, astore. In German, *habicht, grosser habicht.* In Polish, *jastrzabweilki.* The Greek epithet is, *Αστυρας stellaris*; and the Latin appellation, *accipiter stellaris.*

THE SPARROW-HAWK OF CAYENNE.

THIS bird is termed the *thick-billed sparrow-hawk of Cayenne*; for it resembles the sparrow-hawk more than any other bird of prey; being only somewhat larger and rounder shaped. Its bill is also thicker and longer, but the legs rather shorter. The lower part of the throat is of an uniform wine colour; whereas, in the sparrow-hawk it is white, or whitish: but in general the resemblance is so close, that we may consider it as kindred species, and perhaps the difference originates from the influence of climate.

THE PIGEON-HAWK.

THIS bird is from Carolina, and is described by Catesby under the name of *pigeon-hawk*, which is more slender than the common sparrow hawk. Its iris, cere, and feet, yellow; its bill whitish at its origin, and blackish near the hook; the upper part of the head, neck, back, rump, wings, and tail, covered with white feathers, mixed with some brown ones; the legs clothed with long white plumage, tinged slightly with red, and variegated with longitudinal brown spots. The feathers of the tail are brown like those

those of the wings, but marked with four white transverse bars.

THE HOBBY.

THE hobby is much smaller than the falcon, and of a different disposition. The fiery courage of the falcon prompts him to attack birds that are far superior in size; but the cautious hobby, unless it is trained to the chase, rarely aspires beyond the prey of larks and quails. The want of boldness, however, is compensated by its industry. No sooner does it espy the sportsman and his dog, than it hovers in the train, and endeavours to catch the small birds that are put up before them; and what escapes the fowling-piece eludes not the hobby. It seems not intimidated by the noise of fire-arms, and ignorant of their fatal effects; for it continues to keep close to the person who shoots. It frequents the champaign country near woods, especially where the larks are numerous. It commits great havoc among them, and these are well apprized of their fatal enemy; they are alarmed when they descry it, and instantly dive into the bushes, or seek concealment in the herbage. This is the only way in which the lark can effect its escape; for, though it soars to a great height, the hobby can still outstrip it. The hobby lodges and breeds in the forests, and perches upon the tallest trees. Formerly the name of *bobby* was applied to the petty barons who tyrannized over their peasants, and more particularly to gentlemen of the sport who would hunt on their neighbours' grounds without obtaining leave, and who hunted less for pleasure than for profit. This application of the name *bobby* to country gentlemen might also be owing to another circumstance. Those who were not rich enough to keep falcons were contented with breeding hobbies. Hence the phrase that *every man must have his bobby*.

We may observe, that in this species of birds the plumage is blacker during the first year than in the succeeding

succeeding ones. In France there is a variety of the hobby, mentioned by Buffon. The difference consists in this; that the throat, the lower part of the neck, the breast, a part of the belly, and the great feathers of the wings, are cinereous and without spots; whereas, in the common hobby, the throat and the lower part of the neck are white, the breast and the upper part of the belly are white also, with longitudinal brown spots, and the great feathers of the wings are almost black. The tail, which in the common species is whitish below, dashed with brown, is in the variety entirely brown. But notwithstanding such differences, these two birds are still of the same kind; for their size and port are the same, and besides, they have in common a singular character, that the lower part of the belly and the thighs are covered with feathers of a bright rust-colour, and which is strongly contrasted with the rest of the plumage. It is not unlikely but that all this diversity of colours arises from the age or the season of moulting. We have only to add, that in falconry the hobby is carried on the hand without any cover or hood, like the merlin, the sparrow-hawk, and gos-hawk, and that it was formerly much used in hunting partridges and quails. The specific character of the hobby, *falco subbuteo*: "The cere and feet yellow, the back dusky, the nape of the neck white, the abdomen pale with dusky oblong spots, the under side of the rump and the thighs rufous." The male weighs seven ounces; the length twelve inches; the alar extent two feet seven inches. It inhabits Europe and Siberia. In summer it is frequent in England, where it breeds, and migrates in October. It is mentioned above that the larks dread the sight of the hobby. They remain fixed to the ground through fear, which affords the fowler an opportunity of spreading his net over them. This was formerly practised, and termed *daring* the larks.

Synonymes.---Le hobreau, *Buff.* *Falco subbuteo*,
Linn.

Linn. Ray, Will. Aldr. &c. Falco barletta, Ger. Orn. Dendrofalco, Briss. Frisch. Baum-falck, Gunth. Nest.

THE KESTREL.

THE kestrel is one of the most common of the birds of prey, and terrifies all the small birds, on which it shoots like an arrow, and seizes them with its talons; or, if it misses the first dart, it pursues them without fear even to the houses. After it has secured its prey, it kills it, and plucks the feathers neatly; but it is not at such pains with mice, for it swallows the small ones entire, and tears the large ones into pieces. The soft parts of the carcase are digested in the stomach of the bird, but the skin is rolled into a ball, and rejected at the bill. Its excrements are almost liquid, and whitish; and the rolls that are thrown out are found, by soaking in warm water, to be the entire skins of the mice. The owls, buzzards, and perhaps many other kinds of rapacious birds, reject also similar balls, which, besides the skin, contain often the hardest portions of the bones. The same is the case with fisher-birds; the bones and scales of the fishes are collected in the stomach, and thrown out at the bill.

The kestrel is a pretty bird: its sight is acute, its flight easy and well supported: it has perseverance and courage, and resembles in its instinct the noble and generous birds. The female is larger than the male: its head is rust-coloured, the upper side of its back, wings, and tail, marked with cross bars of brown, and all the feathers of the tail are of a rusty brown variously intense; but in the male, the head and tail are grey, and the upper parts of the back and wings are of a vinous rust colour sprinkled with a few small black spots.

Though this bird habitually frequents old ruins, it breeds seldom in these than in the woods: and, when it deposits its eggs neither in the holes of walls nor in the cavities of trees, it constructs a very flimsy sort of

of nest, composed of sticks and roots, pretty much like that of the jays, upon the tallest trees of the forest; sometimes it occupies the nests deserted by the crows. It lays four eggs, but oftener five, and sometimes six or seven; of which the two ends have a reddish or yellowish tinge similar to the plumage. Its young are at first covered with a white down, and fed with insects; they are afterwards supplied with plenty of field mice, which it descends from aloft, as it hovers or wheels slowly round, and on which it instantly darts. Sometimes it carries off a partridge, and often catches pigeons that stray from the flock. But, besides field mice and reptiles, its ordinary prey are sparrows, chaffinches, and other small birds. As it is more prolific than most of the rapacious tribe, the species is more numerous and wider diffused; it is found through the whole extent of Europe, from Sweden to Italy and Spain, and it occurs even in the more temperate parts of North America. The specific character of the kestrel, *falco tinnunculus*, Linn. is, "that the cere and feet are yellowish: the back rufous, with black points; the breast marked with dusky streaks; the tail rounded." It was formerly trained in Great Britain, to catch small birds and young partridges, but laid aside when falconry fell into disuse. It is frequent in the deserts of Tartary and Siberia, and breeds in the small trees scattered through the open country. It appears in Sweden early in the spring, and departs in September. It is uncertain whether it penetrates farther north.

Synonymes.---La creffierelle, *Buff.* *Falco tinnunculus*, *Linn.* *Ray*, *Will.* *Fris.* &c. *Cenchris*, *Klein.* *Falco aureus*, *Id.* *Bothel geyer*, *Guntb.* *Kirch falck.* *Brunn.* *Windwachel*, *bittelweyer*, *wannenweyer*, *Kram.* *Gheppio accertello*, *gavinello*, *Zinn.* *Stannel*, *stonegall*, *windover*, *Alb. Sloane*, &c. The Greek name *Κεγχεύς*, which signifies *millet*, is applied to the kestrel, because, as *Gesner* conjectures, the plumage of this bird is

sprinkled with black spots like millet. The Latin appellation *tinnunculus* from *tinnitus*, probably alludes to its tinkling notes. The former, *Rothel Geyer*, means reddish vulture; *Kirch Falck*, church falcon; *Windwachel*, wind-bird; *Rittelweyer*, riderkite; *Wannenweyer*, fanner-kite; the three last refer to the fanning motion made by this bird. In Italian it is also called *tittinculo*, *tintarello*, *garinello*, *canibello*. In Spanish, *cernicale*, or *zernicalo*. It has been named in English, the *stonegall*, or *stannel*, and the *windbover*.

THE STONE-FALCON.

THIS bird is not so large as the kestrel, and appears very like the merlin, which is employed in falconry. It lodges and breeds, as we are told, in rocks. Frisch is the only naturalist who has given a distinct description of it; and, upon a comparison of his figure with those of the kestrel and merlin, we are much inclined to believe, that the stone-falcon and the species of the merlin used in falconry are the same, or at least closely related. The Linnæan character of the stone-falcon: "The cere is yellowish, the upper side of the body cinereous, the under-side rufous, with dusky longitudinal spots, the tail cinereous, blackish near the end, the tip white." It is about the size of the kestrel, and twelve inches one-fourth long. Synonymses.---Le rochier, *Buff.* *Falco lithofalco*, *Gmel.* *Briss. Will. &c.*

THE MERLIN.

THE merlin is the smallest of all the rapacious tribe, not exceeding the size of a large thrush. Still we must reckon it a generous kind, and the nearest approaching the species of the falcon: it has the same plumage, the same shape and attitude, the same disposition and docility, not inferior in ardour and courage. It can be successfully flown against larks, quails, and even partridges, which it seizes and carries off, though they are much

much heavier than itself; often it kills them with one blow, striking on the stomach, head, or the neck.

This small bird, which resembles the common-falcon so much in its disposition and courage, is however shaped more like the hobby, and still more like the stone-falcon: but its wings are much shorter than those of the hobby, and reach not near the end of the tail; while, in the hobby, they project somewhat beyond it. We have before hinted, that its relation to the stone-falcon is so clear, in the thickness and length of the body, in the shape of the bill, feet, and talons, in the colours of the plumage, the distribution of the spots, &c. that there is reason to suppose that the stone-falcon is a variety of the merlin, or at least that they are two species so nearly connected, that they ought to suspend any decision respecting their diversity. The merlin differs from the falcons, and indeed all the rapacious tribe, by a character which approximates it to the common class of birds; viz. the male and female are of the same size. The great inequality of size, therefore, observed between the sexes in birds of prey, cannot be attributed to the mode of life, or to any peculiar habit: it would seem at first to depend upon the magnitude; for, in the butcher-birds, which are still smaller than the merlins, the males and females are of the same size; while, in the eagles, the vultures, the ger-falcons, the gos-hawks, the falcons, and the sparrow-hawks, the female is a third larger than the male. Upon consulting the accounts of the dissection of birds, we find most females have a large double *cæcum*, while the males have only one *cæcum*, and sometimes none at all; this difference of the internal structure, which is much more frequent in the females than in the males, is perhaps the true physical cause of this exuberant growth.

The merlin flies low, though with great celerity and ease: it frequents woods and bushes to seize the small birds, and hunts alone unassisted by its female: it

breeds in the mountain forests, and lays five or six eggs. But, besides the one just described, there is another kind of merlin, found in the Antilles, which Frisch has figured and Brisson described from nature. This differs considerably from the former, and seems to resemble more the kestrel. The pursuit of the lark by a couple of merlins, is reckoned the most delightful spectacle which this sort of exercise can afford. They act in concert; and, while the one soars high in the air to strike his prey from above, the other watches every motion below; so that the devoted lark has no chance of escaping their united efforts.

The specific character of the common merlin, *Falco æsalon* of Linnæus: "The cere and feet are yellow, the head ferruginous, the upper side of the body aschærulean, with ferruginous spots and streaks, the under side yellowish white, with oblong spots." Gmelin and Latham regard the falconers' merlin, and that of the Antilles, as simple varieties.

Synonymes.---L'Emerillon, Buff. *Falco æsalon*, Gmel. Ray, Will. Klein. Briss. Cenchris, Fris. Accipiter smerillus, Ger. Orn. The Latin name *æsalon*, is the same with the Greek *αισαλων*, which is of uncertain derivation. The modern names seem to allude to its preying upon blackbirds, *merula*: *smerlo* or *smeriglio* in Italian; *myrle* or *smyrlin* in German; and *merlin* in English. In some provinces of France it is called the *passetier*, or *sparrow-catcher*.

The new species of this genus, discovered by the late voyagers, or since the publications of Brisson, Buffon, Latham, &c. are as follow: The white-bellied eagle, *Falco leucogaster*. The Japonese hawk, *Falco Japonicus*. The fierce eagle, *Falco ferox*; from Astracan. The black-cheeked eagle, *Falco Americanus*; from North America. It is of the bulk of the ring-tail eagle. The Cheela falcon, *Falco Cheela*; from India. The Asiatic falcon, *Falco Asiaticus*; from China. The spotted eagle, *Falco maculatus*; a native of

of Europe. The Statenland eagle, *falco Australis*. The Chilian falcon, *falco tharus*. Its cere and legs are yellow, its body blackish white, its top crested. It breeds on lofty trees, laying five eggs. The black-backed eagle, *falco melanonotus*. The white-crowned eagle, *falco leucoryphos*. The Russian eagle, *falco mogilnik*; from the deserts on the Tanais. The caracca falcon, *falco cristatus*. The leverian falcon, *falco leverianus*. The rough-legged falcon, *falco lagopus*; from the north of Europe and of America. The booted falcon, *falco pennatus*. The javan falcon, *falco maritimus*. The Arabian kite, *falco forskalii*. Inhabits Egypt in winter. The Austrian kite, *falco Austriacus*. The equinoctial eagle, *falco Equinoctialis*; from Cayenne. The oriental hawk, *falco orientalis*; from Japan. The speckled buzzard, *falco variegatus*; from North America. The sclavonian falcon, *falco marginatus*. The barred-breasted buzzard, *falco lineatus*; from north America. The collared falcon, *falco rusticulus*; from Sweden and Siberia. The long-tailed falcon, *falco macrourus*; from Russia. The northern falcon, *falco hyemalis*; from New York. The rhomboidal falcon, *falco rhombeus*; from the Ganges. The black-necked falcon, *falco nigricollis*; from Cayenne. The white-necked falcon, *falco albicollis*; from Cayenne. The rufous headed falcon, *falco meridionalis*; from Cayenne. The black and white falcon, *falco melanoleucos*. Its legs are yellow, its body white; its head, neck, back, axillæ, and wing-quills, black. It inhabits Ceylon, and is called *kaloe koeroelgeya*. Its length is sixteen inches, its weight ten ounces. The surinam falcon, *falco sufflator*. The laughing falcon, *falco cachinnans*; from South America. The streaked falcon, *falco melanops*; from Cayenne. The notched falcon, *falco bidentatus*; from Cayenne. The marsh hawk, *falco uliginosus*; from America. The behree falcon, *falco calidus*; from India. The plumbeous falcon, *falco plumbeus*; from Cayenne. The Bohemian

150 NATURAL HISTORY

Bohemian falcon, *falco Bohemicus*. The brown hawk, *falco badius*; from Ceylon. The dusky falcon, *falco obscurus*; from North America. The Guiana falcon, *falco superciliosus*. The Ingrian falcon, *falco vespertinus*. Its cere, its legs, and its eye-lids, are yellow; its vent and its thighs ferruginous. It flies in the dusk of the evening, and preys chiefly on quails. It nestles on the summits of trees. It is found throughout Russia and Siberia. The criard falcon, *falco vociferus*; from India. The Siberian falcon, *falco regulus*.

STRIX, OR OWL, of the Order of ACCIPETRES.

THE characters of this genus are, the bill is hooked, and covered at the base with bristles, instead of that membranous substance called the cere in other predatory birds. The nostrils of owls are oblong, and their tongues cloven at the end; the heads are, in every species, remarkably large, and in some, the large apertures of the ear, called the horns, are covered with a tuft of feathers; their claws are hooked and sharp; and the outer toe capable of turning backward like that of the parrot. There are forty-three species, besides many varieties; and they are ranged in two subdivisions, the *eared*, and the *earless*.

The eyes of these birds distinguish them from every other genus; they are large and protuberant, and possess such exquisite sensibility, that they are dazzled by the full light of day, and altogether overpowered by the rays of the sun. As among quadrupeds, those of the tiger and cat kind, by the structure of the eye, are capable of seeing in a faint light; so among the feathered race, this numerous tribe is fitted for plunder amid the darkness of night, when the other animals are overpowered by sleep. "In these birds," says Goldsmith, "the pupil of the eye is capable of opening very wide, or shutting very close; by contracting the pupil, the brighter light of the day, which would act too

powerfully on the sensibility of the retina, is excluded; by dilating the pupil, the animal takes in the more faint rays of the night, and thereby is enabled to spy its prey, and catch it with greater facility in the dark."

We are not however to imagine that the eyes of these animals, which are so perfectly fitted for a feeble light, can see without it altogether, or are capable of penetrating into absolute darkness. On the contrary, in the dead of night it is probable that they see but little, and resemble the hares, wolves, and stags, who issue from the woods to feed or to chace in the night; only the eyes of these animals seem less dazzled by the full glare of the rays of the sun. It is in the evening twilight, or at the dawn of day, that the owls are best fitted for seeing; it is then they issue from their dark retreats to chace or surprise their prey. Their search is generally successful; for, at these hours of rest, the little animals are off their guard, and incapable of eluding their search.

Except during the nights of moon-shine, their time of chace is but very short; for they generally retire to their lurking places, before they are surprised by the profound gloom of midnight, or the dazzling beams of the sun. Moonshine is their harvest; a season of pleasure and abundance; for then they protract their flight for several hours, and lay up an ample store of provision. If, from the scarcity of game, they continue their search longer than usual, and, following the dictates of appetite rather than of prudence, wait till broad day-light breaks upon them, they are bewildered, dazzled, and confounded, and, however far from home, are obliged to remain in the same spot till the return of evening. If you force them away, they make short slow flights, as if afraid of dashing against some unseen object. If the other birds perceive, by his awkwardness or fear, the distress of the owl's situation, they fly with emulation to insult him. The thrush, the jay, the bunting, and the red-breast, attack him

him in a body, with cries, insults, and strokes of their wings. The unfortunate owl knows not how to defend himself, or where to fly; "astonished and purblind, he only replies to their mockeries by aukward and ridiculous gestures, by rolling his eyes, and turning his head with an air of stupidity." Among this tribe of tormentors, the smallest and most feeble of his enemies are commonly the foremost; and, by a mistake similar to what the owl himself has committed, they sometimes prolong their insults till the return of evening restores him the use of his sight. Then he becomes truly formidable, and inflicts on his tormentors dreadful revenge for their ill-timed audacity.

All the different species of owls are not equally distinguished by sensibility in the organs of sight; and consequently not equally overpowered by the light of day. The great owl of North America takes considerable flights, and is sometimes seen chasing its prey successfully in broad day; while the common barn owl, far from being able to encounter the full rays of the sun, possesses such sensibility of vision, that it catches mice even in the middle of the night. This difference in the sight of the owls, regulates the time of their depredations; such as nearest resemble other birds, issue from their retreats immediately after the setting of the sun; the more quick sighted, remain concealed till later in the evening, when they fall with destructive success on the smaller birds, in the midst of that season of repose. The owls in general conceal themselves in some dark retreat during the day; the cavern of a rock, the hollow of a tree, or the holes of a ruinous and unfrequented castle, are the solitary abodes preferred by these gloomy birds: there, they often render the solemnity of these dreary haunts tremendous by their cries. The harshness of their notes, the darkness and silence during which they are heard, joined to the gloomy habitations where these birds dwell, have always strongly affected the imaginations of men, and given
rise

rise to melancholy ideas. The prejudices and weakness of the uninformed part of mankind, alarmed by these frightful images, have always led them to regard the voice of the screech-owl as a presage of some sad calamity that awaited them. It is only, however, when the owls are stationary, that they utter these doleful notes; while in pursuit of their prey, they are all silent, as the smallest noise might alarm the animal which it is their endeavour to surprise.

THE GREAT-HORNED OWL.

THE poets have consecrated the eagle to Jupiter, and the owl to Juno. The owl is indeed the eagle of the night, and the king of that tribe of birds which avoid the light of day, and resume their activity after the shades of the evening descend. At first sight it appears as large and strong as the common eagle; but it is really much smaller, and its proportions are quite different. The legs, the body, and the tail, are shorter than in the eagle; the head much larger; the wings not so broad, and do not exceed five feet. It is easily distinguished by its coarse figure, its enormous head, the broad and deep cavities of its ears, the two tufts which rise more than two inches and a half on its crown; its bill short, thick, and hooked; its eyes large, steady, and transparent; its pupils large and black, surrounded with a circle of an orange-colour; its face encircled with hairs, or rather small white ragged feathers, which terminate in the circumference of other small frizzled feathers; its claws black, very strong, and hooked; its neck very short; its plumage of a rusty brown, spotted with black and yellow on the back, and with yellow on the belly, mottled with black spots, and ribbed with a few bars of a brown colour confusedly intermixed; its feet covered to the claws with a thick down and rusty feathers; and lastly, its frightful cry, with which it interrupts the silence of

the night, when all the other animals enjoy the sweets of repose.

The following particulars are mentioned by Frisch, in regard to the different cries of the great-horned owl, which he kept a long time. "When it was hungry it uttered a sound like that of the word *pubu*; if it heard a person cough or hawk, it began very loud, like the laughter of a peasant in liquor, and continued as long as possible without inspiring." "I suppose," subjoins Frisch, "that this was in the love season, and that it took the coughing for the cry of its female: but, when it cries through pain or fear, the sound is exceedingly strong and harsh, though a good deal like that of the birds which prey by day." The female differs from the male in nothing except that its plumage is generally darker. Its prey consists mostly of young hares, rabbits, moles, and mice, which it swallows entire, digests the fleshy parts, and afterwards throws up the hair, bones, and skin, rolled into a ball; it also devours bats, serpents, lizards, toads, and frogs, and feeds its young with them. "I have," says Frisch, fed them with ox-flesh and liver, of which they swallowed very large bits. If mice were thrown to them, they crushed the bones with their bill, then swallowed them one after another, sometimes to the number of five. After some hours, the hair and bones are collected in the stomach, and rejected through the bill. When they can get nothing else, they eat small and middle-sized river-fish of every kind; and, after the bones are crushed and rolled in the stomach, they push these up the throat, and throw them out. They will not drink, a circumstance which I have observed in some diurnal birds of prey." We may observe that these birds can subsist without drinking; but they will often drink when they imagine themselves to be concealed.

They nestle sometimes in hollow trees, but oftener in the crags of rocks, or in the holes of lofty old walls.

Their

Their nest is near three feet in diameter, composed of small branches of dry wood interwoven with pliant roots, and strewed with leaves. They commonly lay two eggs, but seldom three; these resemble somewhat the colour of the plumage of the bird, and are larger than hens eggs. The young are very voracious; and the parents are vigilant in providing subsistence, which they procure in silence, and with more agility than we should suppose. They support more easily the light of day than the other nocturnal birds; for they leave their haunts earlier in the evening, and later in the morning. Sometimes the great owl is seen attacked by flocks of crows, which accompany his flight and surround him by thousands; he withstands their onset, drowns their hoarse murmurs with his louder screams, disperses them, and often when the light begins to fail he seizes some ill-fated victim from among them. Though his wings are shorter than those of most of the birds that soar, he can rise to a great height, especially about twilight; but at other times he generally flies low, and to short distances. Its appearances in cities was also deemed an unlucky omen; Rome itself once underwent a lustration because one of them strayed into the capitol. The ancients had them in the utmost abhorrence; and thought them, like the screech-owls, the messengers of death. Pliny styles it *bubo funebris*, and *noctis monstrum*.

*Solaque culminibus ferali carmine bubo
Sæpe queri et longas in fletum ducere voces.* VIRGIL.

Perch'd on the roof, the bird of night complains,
In lengthen'd shrieks and dire funereal strains.

This species of the owl was formerly employed in falconry, to attract the notice of the kite; and he was furnished with a fox-tail to heighten the singularity of his figure. Thus equipped, he skims along the surface of the ground, and alights on the plain, without venturing to perch upon a tree. The kite perceives

him from a distance, and advances not to fight or attack him, but to admire his odd appearances, and generally hovers about unguarded, till he is surprised by the sportsman, or caught by the birds of prey that are flown at him.

With regard to the internal structure of this bird, it has been remarked, that the tongue is short and broad, the stomach capacious, the eye inclosed in a cartilaginous coat in the form of a capsule, the brain invested with a single coat thicker than that of other birds; and, as in the quadrupeds, there are two membranes which cover the cerebellum. It appears that in this species there is a first variety which includes a second; both are found in Italy, and have been mentioned by Aldrovandus. The one may be called the black-winged great owl, and is the first variety of the great-eared owl in the Linnæan system, and the Athenian horn-owl of Edwards and Latham.

The second, is the naked-footed great-horned owl, which is the second variety of Linnæus, and the smooth-legged owl of Latham.

The first differs from the common great-horned owl only by the colours of its plumage, which is browner or blacker on the wings, the back, and the tail. The second, which resembles it exactly in the deepness of its colour, is distinguished by its legs and feet, which are but slightly shaded with feathers.

Besides these two varieties, which are found in our own climate, there are others which occur in distant countries. The white eagle-owl of Lapland, mottled with black spots, appears to be only a variety produced by the cold of the north. This is the *Strix Scandiaca*, a variety of the *Strix Virginiana* of Linnæus, or *Virginian eared owl*.

Most of the quadrupeds are either white, or soon become so, within the polar circle, and many birds are subject to the same change. This bird, which is found in the mountains of Lapland, is white, spotted with black; and

and the difference of colour is what alone distinguishes it from the common great-horned owl. We may therefore refer it to that species as a mere variety. As this bird can bear both heat and cold, it is found in the north and south of both continents; and not only is the species spread so extensively, but even the varieties. The *jacurutu* of Brazil, described by Marcgrave, is exactly the same as our common great-eared owl; and one brought from the Straits of Magellan differs little from the European species. That mentioned by the author of the voyage to Hudson's-bay by the name of *crowned owl*, and by Edwards *eagle owl* of Virginia, are varieties which occur in America the same with those in Europe; for the most remarkable difference between the common eagle-owl and that of Hudson's-bay and of Virginia is, that the tufts rise from the bill, and not from the ears. But in the figures of the three eagle-owls given by Aldrovandus, the tufts rise from the ears in the first only, or the common; and in the others, which are but varieties that occur in Italy, the tuft feathers are not inserted at the ears, but at the base of the bill, as in the eagle-owl of Virginia described by Edwards. Marcgrave says, "It is equal in bulk to the goose; its head is round like that of a cat; the bill thick and black, the upper mandible projecting; the eyes large, prominent, round, and shining like crystal, within which a yellow circle appears near the margin; near the ears are feathers two inches long, which are erect, and tapering to a point like ears. The great-crowned owl is very common in the country about Hudson's-bay. It is a very singular bird, and its head is scarcely smaller than that of a cat; what are called its horns are feathers which rise precisely above the bill, where they are mixed with white, becoming by degrees of a brown red, spotted with black."

Edwards says, "this bird is one of the largest species of owls, and much resembling what we call the eagle-owl. Its head is as large as that of a cat. The bill

bill is black; the upper mandible is hooked, and projects beyond the lower, as in the eagles; it is also sheathed with a skin in which nostrils are placed, which is covered at the base with grey feathers that encircle the bill; the eyes are large, and the iris is shining and gold-coloured. The feathers which form these horns rise immediately above the bill, where they are mixed with a little white; but as they advance above the head they become of a brown red, and terminate with black on the outside. This article includes two species of owls in the Linnæan system: 1st, *Strix bubo*, or the great-eared owl, which has a rufous plumage; it is of the size of the eagle; it inhabits Europe, and is found, though rarely, in the north of England, Cheshire, and Wales. It includes three varieties: first, the Athenian horn-owl, which is of a darker colour, and has more slender feet: secondly, the smooth-legged owl, whose feet are naked: thirdly, the Magellanic eared owl, or jacurutu of Marcgrave, which is dusky-yellowish, variegated with white. 2dly, *Strix virginianus*, or the Virginian eared owl, the eagle owl, or horned owl. "Its upper part is dusky, variegated with delicate rufous and cinereous lines; below, it is pale cinereous, with dusky transverse streaks; the throat and sides of the breast streaked with dusky orange." It is rather smaller than the preceding; it inhabits the north of Asia, and the whole of America, where, during the night, it makes a hideous noise in the woods, not unlike the hallooing of a man, and has often misled travellers. The Indians dread its ominous presages, and are provoked at any person who mimics its hooting.

Synonymes.---Le duc, ou grand duc, Buff. *Strix bubo*, Linn. Gmel. Will. Kram. Briss. &c. *Ulula*, Klein. *Bubo maximus*, Ger. Orn. In Italian, *guso*, *duco*, *dugo*. In Spanish, *bubo*. In Portuguese, *mochbo*. In German, *ubu*, *bubu*, *schuffut*, *bhu*, *becgbu*, *bubuy*, *hub*, *buo*, *pubi*. In Polish, *pubacz*, *sowleзна*. In Swedish, *uf*.

The

The Greek name *βυας* is perhaps derived from *βες*, an ox, from the resemblance of the cry of the owl to the bellowing of an ox. The Latin *bubo* is said to be formed from *bufo*, a toad, which it was supposed by the vulgar to breed. Does it not come from *bos*, *bovis*, an ox, for the same reason as the Greek name?

THE LONG-EARED OWL.

THE ears of this bird are very wide, and covered with a tuft formed of six feathers pointing forwards; but these tufts are much shorter than those of the great owl, and hardly exceed an inch in length; they are however proportioned to its size, for it weighs only about ten ounces; it is therefore a species evidently different from that of the great owl, which is about the bulk of a goose. The long-eared owl measures about a foot from the point of the bill to the claws; its wings extend three feet, and its tail is five or six inches. The upper part of its head, neck, back, and wings, are marked with rays of grey, rusty, and brown; the breast and belly are rusty, with irregular and narrow brown bars; the bill is short and blackish; the eyes of a fine yellow; the feet covered with rusty-coloured feathers as far as the origin of the claws, which are pretty broad, and of a blackish brown. We may also observe, that the tongue is fleshy, and somewhat forked, the nails very sharp, the outer claw moveable, and may be turned backwards; the stomach capacious, the gall-bladder very large, and the two *cæcas* proportionally thicker than in the other birds of prey.

This species is common in the north of England, in Scotland, and Wales; it is stationary during the whole year, and is even found more readily in winter than in summer. It commonly lodges in old ruined buildings, in the caverns of rocks, in the hollows of aged trees, in mountain-forests, and seldom ventures to descend into the plains. When attacked by other birds, it makes a dexterous use of its talons and bill; and it even
turns

turns on its back when its antagonist is too powerful. This species admits of several varieties, the first of which occurs in Italy, and has been described by Aldrovandus. It is larger than the common sort, and differs in the colour of its plumage. These birds seldom take the trouble to construct a nest; but deposit their eggs in the nests of other birds; often in those of magpies, and sometimes in those of buzzards. They generally lay four or five eggs, and the young, which are at first white, acquire their natural colour in the course of fifteen days.

As this owl can support cold, and is found in Sweden and in France, and passes the winter in our latitudes, it could migrate from one continent into the other. It appears that it is found in Canada, and in many other parts of North America; and probably the owl of Carolina described by Catesby, and that of South America mentioned by Father Feuillée, are only varieties of our species, occasioned by the difference of climates; especially as they are nearly of the same size, and differ only in the shades and distribution of their colours.

The following passage from Charlevoix must refer to the long-eared owl: "There is heard almost every night in our island a kind of tawny owl which they call *canot*, and which utters a mournful cry, as if it hallooed *au canot* (to the canoe), whence its name. These birds are not larger than turtles, but they are exactly similar in their plumage to the long-eared owls. They have two or three small feathers on both sides of the head, which look like ears. Sometimes seven or eight of them assemble on our house-tops, and scream without interruption the whole night." Frisch, speaking of this owl, says, that its cry is very frequent and strong; and he compares it to the hooting of children running to make game of one; but that this cry is common to several kinds of owls. The ludicrous gestures ascribed by the ancients to the long-eared owl,

belong to most of the nocturnal birds; their aspect is marked with astonishment, they turn their neck frequently, move their head upwards, downwards, sideways, crack their bill, tremble with their legs, shifting their toe backwards and forwards. If something uncommon occur, they open their large eyes, bristle their feathers, and look twice as big; they also spread their wings, cower, or squat, but suddenly rise again as if to put themselves in a posture of defence.

The specific character of the long-eared owl, *Strix otus*, Linn. is, that "the tufts of its ears consist of six feathers." It inhabits Europe, America, and the north of Asia, and is even found in the warm climate of Egypt. It lives in the woods remote from the sea, near the settlement of Hudson's-bay. It approaches the dwellings, and is very noisy. It builds in the trees, and never migrates.

Synonymes.---Le hibou, ou moyen duc, *Buff.* *Strix otus*, *Linn.* *Gmel.* *Will. Kram*, &c. *Asio*, *Briss.* and *Klein.* *Noctua minor aurita*, *Frisch.* *Hornoder-ohr-eule*, *Gunth. Nest.* The horn owl, *Albin.* In Greek it was called $\alpha\sigma\iota\sigma$, from $\epsilon\varsigma$, the ear; in Latin, *otis*, or *asio*; in modern Italian it is termed *gufo*, or *barbigianni*; in Spanish, *mochuelo*; in German, *ohr-eule*, (*ear-owl*;) *katz-eule*, or *kautzlein* (*coot-owl*;) in Swedish, *born-ugla*; in Polish, *kluknocny*, or *sowa-ursata*.

THE SCOPS, OR LITTLE HORNED OWL.

THIS species is easily distinguished from the other two; for its size exceeds not that of the black-bird, and the tufts over the ears project only half an inch, and consist of a single feather: also, its head is much smaller in proportion to its body, and its plumage is more elegantly and distinctly mottled, being variegated with grey, ferruginous brown, and black, and its legs are clothed to the origin of the nails with feathers of a rusty grey mixed with brown spots. It is distinguished also by its instinct; for in spring and autumn it migrates

into other climates. It seldom passes the winter in our climate, but departs after, and returns a little before, the swallows. Though the scops-eared owls prefer the high grounds, they crowd where field-mice abound, and are useful in extirpating these destructive animals, which in some years multiply extremely, and consume the grain, and destroy the roots of plants that are the most necessary to the support of man. It has been often observed, that, when this calamity is threatened, the scops assemble in flocks, and make war so successfully against the mice, that in a few days they entirely clear the field. Dale, in his History of Harwich, quotes two instances of this from Childrey. "In the year 1580, at Hallowtide, an army of mice so overran the marshes near South-Minster, that they ate up the grass to the very roots. But at length a great number of strange painted owls came and devoured all the mice. The like happened in Essex anno 1648." Dale ascribes this to the long-eared owl, yet the appellation of strange painted owls seems to mark the scops.

Perhaps these assemblies of the scops are formed with the view of beginning a distant journey: it is even probable, that they migrate from the one continent into the other: for the bird of New Spain, mentioned by Nierenberg by the name of *talcbicualti*, is either of the same species, or of one nearly allied to that of the scops. But, though it travels in numerous flocks, it is still rare and not easily caught. Their colour varies according to the age, the climate, and perhaps the sex; they are all grey when young, but as they grow up some are browner than others; the colour of the eyes seems to correspond to that of the plumage; those that are grey have eyes of a pale yellow, in others the colour is deeper; but these differences are slight, and ought not to alter the classification.

Synonymes.---Le scops, ou petit duc, *Buff.* Strix scops, *Linn. Gmel. Will. Briss. Klein.* Hornoder ohreule, *Gumb. Nest.* Chiu, allocarello, chivino, *Zimm.*

In

In the Greek $\Sigma\alpha\upsilon\lambda\omicron$, which seems to be formed of $\Sigma\alpha\iota$, a shadow, and $\alpha\upsilon$, the face; probably because it avoids the light.

THE ALUCO, OR BLACK OWL.

THE aluco, which may also be named the *black owl*, and which the Greeks called the *nycticorax* or *night raven*, is the largest of all the owls. It is near fifteen inches long from the point of the bill to the claws; its head is large, round, and without tufts; its face sunk as it were in the plumage; its eyes are buried in greyish ragged feathers; the iris blackish, or rather deep brown; the beak of a yellow or greenish white; the upper part of the body a deep iron-grey, mottled with black and whitish spots; the under white, with longitudinal and transverse bars; the tail somewhat more than six inches, the wings stretching a little beyond its extremity, and when spread, measure three feet; the legs covered to the origin of the nails with white feathers, sprinkled with black points: these characters are fully sufficient to distinguish the aluco from all the others; it flies lightly, and not rustling with its wing, and always sideways, like the rest of the owls. Its cry, resembling the howling of wolves, was the foundation of its name *ulula* among the Romans; and the same analogy has led the Germans to apply the term *boo boo*. Salerne says, "this bird howls in the night, especially when it freezes, with so gloomy a moan, as to terrify women and children."

The aluco lodges during summer in the woods, and constantly in hollow trees. Sometimes it ventures in winter to approach the habitations of man; it pursues and catches small birds; but field-mice are its more usual prey; it swallows them whole, and afterwards discharges by its bill the skins rolled into balls. When it is unsuccessful in the field, it resorts to the farm yards and barns, in quest of mice and rats. It retires early in the morning to the woods, about the time that

the hares return to their retreats, and conceals itself in the thickest copse, or remains the whole day motionless in the foliage of the shadiest trees. During inclement weather, it lodges in hollow trees in the day, and makes its excursions in the night. These instinctive habits are common to it and to the long-eared owl, as well as that of depositing its eggs in the nests of other birds, such as the buzzards, the kestrels, the crows, and magpies. It generally lays four eggs, of a dirty grey colour, round shaped, and nearly as large as those of a pullet. The specific character of the aluco is, that "its head is smooth, its body ferruginous, its irides black." It is a native of Europe, and is held sacred among the Calmuck Tartars.

Synonymes.---*La hulotte*, Buff. *Strix aluco*, Linn. *Gmel.* and *Scop.* *Ulula*, Briff. and *Will.* *Noctua major*, Fris. *Ulula vulturina*, Klein. Black owl, *Albin*, Brown owl, *Penn.* and *Lewin.* In Greek, *νυκτιγοράξ*; in Latin, *ulula*, from its howling cry; in Italian, *alocchio*; in German, *bubu*; in Polish, *lelok*, *sowka*, and *pufzzik*; in Portuguese, *coruja*.

THE TAWNY OR SCREECH OWL.

THE tawny owl is distinguished by its bluish eyes, the beauty and variety of the colours of its plumage, and its cry, by which it seems to shout or halloo with a loud voice. The colour of the back, head, coverts of the wings, and on the scapular feathers, are a fine tawny red, elegantly spotted and powdered with black or dusky spots of various sizes: on the coverts of the wings and on the scapulars are several large white spots; the coverts of the tail are tawny, and quite free from any marks: the tail is variously blotched, barred and spotted with pale red and black; in the two middle feathers the red predominates; the breast and belly are yellowish, mixed with white, and marked with narrow black strokes pointing downwards: the legs are covered with feathers down to the toes. This

is

is the *strix* of *Aldrovandus*, and what we call the *screech-owl*; to which the folly of superstition had given the power of presaging death by its cries. The ancients believed that it sucked the blood of young children: a fact some think not incredible; for *Hasselquist* describes a species found in *Syria*, which frequently in the evening flies in at the windows, and destroys the helpless infant:

*Nocte volant, puerosque petunt nutricis egentes,
Et vitiant cuneis corpora rapta suis.
Carpere dicuntur latentia viscera rostris,
Et plenum poto sanguine guttur habent.
Est ilis strigibus nomen, sed nominis hujus
Causa quod horrenda stridere nocte solent.*

Ovid *Fast.* vi. 135.

The tawny owls are scarcely found any where but in the woods; they lodge in hollow trees, and seldom approach the habitations of men. It is a native of *Sweden*, and other northern countries, and hence it has migrated into the continent, and is found in *America*, even between the tropics. The specific character of the tawny owl, or *strix stridula* *Linn.* is, "Its head is smooth, its body ferruginous, and the third feather of the wing longer than the rest." It inhabits the more southern deserts of *Europe* and *Tartary*; and even in *England*, it is pretty frequent in the woods. It breeds in the rook's nests. It is not found in *Siberia*. Weighs nineteen ounces.

Synonymes.---*Le chat-huant*, *Buff.* *Strix stridula*, *Linn.* *Gmel.* *Brun.* and *Kram.* *Noctua major*, *Fris.* *Strige*, *Zinn.* The common brown or ivy owl, *Will.* and *Alb.* In Greek *γλαυξ*, from *γλαυκος*, sea-green, on account of its colour; in Latin, *noctua*, being a nocturnal bird; in German, it is *milch sanger* (milk singer), *kinder* (the child), *melcker* (the milker), and *stock-eule* (the stick owl).

THE

THE WHITE OWL.

THE white owl alarms the timid by its blowing notes, its sharp doleful cries, and its broken accents, which often disturb the deepest silence of the night. It is in some degree domestic; it inhabits the most populous towns, towers, belfries, the roofs of churches, and other lofty buildings, which afford it a retreat during the day. It leaves its haunts about twilight, and continually repeats its blowing, which resembles the snoring of a man who sleeps with his mouth open. When it flies or alights, it utters also different sharp notes, which are all so disagreeable, that, joined to the awfulness of the scene, re-echoed from the tombs and the churches in the stillness and darkness of night, inspire dread and terror in the minds of women and children, and even of men who are under the influence of the same prejudices, and who believe in omens and witches, in ghosts and apparitions. They regard the white owl as a funeral bird, and the messenger of death; and they are impressed with an idea, that if it perches upon a house, and utters cries a little different from ordinary, it then summons the inhabitant to the tomb.

It is readily distinguished from the other earless owls, by the beauty of its plumage; it is nearly of the same size with the tawny owl, smaller than the aluco, and larger than the brown owl. Its extreme length is a foot, or thirteen inches; its tail measures only five inches; the upper part of its body is yellow, waved with grey and brown, and sprinkled with white points; the under part white, marked with black spots; the eyes regularly encircled with white feathers, so slender that they might be taken for hairs; the iris is of a fine yellow, the bill white, except the end of the hook, which is brown; the legs covered with white down, the claws white, and the nails blackish. There are others which, though of the same species, seem at first to be very different; in some the breast and belly are of a fine yellow,

low, sprinkled the same black points; in others they are perfectly white; in some yellow, and without a single spot. The female is somewhat larger than the male, and the colours of its plumage are lighter and more distinct; and of all the nocturnal birds its plumage is the most beautifully varied.

The species of the white owl is numerous, and very common in every part of Europe. It is also found through the whole of the continent of America. Marcgrave found it in Brasil, where the inhabitants call it *tuidara*. The white owl does not, like the aluco and the tawny owls, deposit its eggs in the nests of other birds. It drops them in the bare holes of walls, or in the joists of houses, and also in the hollows of trees; nor does it spread roots or leaves to receive them. It begins early in the spring, in the end of March, or the beginning of April. It lays five eggs, sometimes six or seven, of a longish shape, and whitish colour; it feeds its young with insects and fragments of mice. Their parents clear the churches of the mice; frequently drink or rather eat the oil from the lamps, especially when it hath congealed; swallow mice and small birds whole, vomiting afterwards the bones, feathers, and skin. In fine weather, most of these birds visit the neighbouring woods in the night, but return to their usual haunts in the morning, and there slumber and snore till dark, when they sally from their holes, and fly tumbling almost to the ground. In the severe seasons five or six are sometimes discovered in the same hole, or concealed in the fodder, where they find shelter, warmth, and food; for the mice are more plentiful then in the barns than at any other time. In autumn they kill the wood-cocks, and eat them on the spot; they sometimes carry off thrushes and other small birds, often swallowing them entire with their feathers. These instincts, and that of flying sideways with rustling wings, are common to the white, the aluco, and the tawny owls. The specific character of the white owl,

owl, *Strix flammea*, Linn. is, that "its head is smooth, its body yellowish, with white points; below it is whitish, with blackish points." It is common in England. It is found through Europe and America, but not farther north than the latitude of Sweden. In Tartary it receives divine honours, from a tradition that it was instrumental in saving the Emperor Zingis Khan; and even at present, the Kalmucks have retained the custom of wearing a plume of its feathers on great festivals.

Synonymes.--L'Effraie, ou la fresaie, *Buff.* *Strix flammea*, *Linn.* *Gmel.* *Mull.* and *Bor.* *Aluco*, *Briff.* *Ray*, *Brun*, and *Klein.* *Aluco minor* of *Aldrovandus*, *Will.* *Tuidar*, *Marcgr.* *Shilëffer eule*, *perle-eule*, *Frisch.* The Greek name *Ελαιο*, is perhaps taken from the same word, which signifies *pity*, alluding to its mournful cries; the German appellations allude to its figure and manner of living; *schleyer-eule*, veiled owl; *perle-eule*, pearly owl; *kirch-eule*, church owl; and *schlaffer eule*, the sleepy owl.

THE BROWN OWL.

THIS species is pretty common, but does not frequent our habitations so much as the white owl. It haunts quarries, rocks, ruins, and deserted edifices; it even prefers mountainous tracts, craggy precipices, and sequestered spots; but it never resorts to the woods, or lodges in hollow trees. The colour of its eyes, which is a bright yellow, distinguishes it from the *aluco* and the tawny owls. The difference is more slight between it and the white owl; because in both, the iris is yellow, surrounded with a circle of small white feathers; the under-part of the belly is tinged with yellow; and their size is nearly the same. But the brown owl is of a deeper colour, marked with larger spots resembling small flames; whereas those of the white owl are only little points or drops; hence the former has been termed *noctua flammeata*, and the latter *noctua guttata*. The feet of the brown owl are closely

closely covered with feathers, and the bill is brown; while the bill of the white owl is whitish, and brown only near the tips. In this species also, the plumage of the female is marked with smaller spots than the male, and its colours more dilute. In the night they are very clamorous; and when they hoot, their throats are inflated to the size of an hen's egg. In the dusk they approach our dwellings; and will frequently enter pigeon-houses, and make great havoc in them. They destroy numbers of little leverets, as appears by the legs frequently found in their nests. They also kill abundance of moles, and skin them with as much dexterity as a cook does a rabbit. They build early, and lay four eggs, of an elliptic form, and of a whitish colour. It appears that the brown owl, which is common in Europe, especially in the hilly countries, is also found in the mountains of Chili; and that the species described by Father Feuillée by the epithet of *rabbit*, because it was discovered in a hole in the ground, is only a variety of the European kind, differing by the distribution of its colours. If indeed it had made the excavation itself, as Father Feuillée imagines, we must consider it as entirely distinct from any owl even of the ancient continent. But such a supposition is unnecessary; it is most likely that, guided by instinct, it only crept into holes which it found already formed. Father du Tertre, speaking of a nocturnal bird called the *devil* in our American islands, says, that it is as large as a duck; that its aspect is hideous; its plumage mixed with white and black; and that it lives on the highest mountains; that it burrows like a rabbit in the holes which it makes in the ground, where it lays its eggs, hatches, and raises its young; that it never descends from the mountains, except in the night; and, when it is on the wing, it utters a melancholy frightful cry. This is certainly the same bird with the one mentioned by Feuillée, and with the brown owl.

The specific character of the brown owl, or *Strix ulula*, given by Linnæus, is, "That the upper part of its body is dusky, with white spots; the tail-feathers inscribed with white lines." The description of Latham is more accurate and complete: "Its head is smooth; the upper part of the body is tawny, with dusky longitudinal spots; below whitish with dusky longitudinal spots; below whitish with dusky lines; the tail marked with dusky bars." It is fifteen inches and a half long, and weighs fourteen ounces. It is not common in England. It includes two varieties: 1. The arctic owl, *Strix arctica*, of which the body is ferruginous above, with black spots; and the orbits, the bill, and a bar under the wings, are black. It inhabits the northern parts of Sweden, and is eighteen inches long. 2. The caspian owl, *Strix accipitrina*, of which the upper part of the body is slightly yellowish; and below it is yellowish white, with blackish longitudinal spots. It inhabits the Caspian Sea, the southern parts of Russia and Tartary, and occupies deserted nests.

Synonymes.---Le chouette, ou la grande cheveche, Buff. *Strix ulula*, Linn. Gmel. Mull. and Georgi. *Ulula*, flammeata, Frisch. *Strix cinerea*, Ray, Will. and Browsk. *Noctua major*, Briss. *Noctua faxatilis*, Gefn. and Aldrov. Grey owl, Will. Great brown owl. Alb. Perhaps its Greek name *αιγωλιος* is from *αιξ*, *αιγος*, a goat, because like that animal is fond of rocks. The appellation in German is *stein-eule*, for the same reason. In Polish it is called *sowa*.

THE PASSERINA, OR LITTLE OWL.

THE little owl and the scops owl are nearly of the same size, both being the smallest of the genus. They are seven or eight inches long from the point of the bill to the claws, and not larger than a blackbird; but they are still a distinct species; for the scops is furnished with very short slender tufts, consisting of a single feather



Edwards del.

Barlow sculp.

The Pulsatrix, or Little Owl.

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ther on each side of the head, which are entirely wanting in the little owl: besides the irides are of a lighter yellow; the bill of a paper-colour; the feathers that encircle the face are white tipped with black; the head brown, spotted with white; on the breast is a mixture of white and brown; the belly is white, marked with a few brown spots; the tail of the same colour with the back; in each feather barred with white; in each adorned with circular white spots, placed opposite to one another on both sides of the shaft; the legs and feet are covered with feathers down to the claws. The Italians make use of this owl to decoy small birds to the limed twig. Mr. Stewart, author of the Antiquities of Athens, informs us that this species of owl was very common in Attica; that they were birds of passage, and appeared there in the beginning of April in great numbers; that they bred there; and that they retired at the same time as the storks, whose arrival they a little preceded. It seldom haunts the woods; but its chief abode is among solitary ruins, caverns, and old deserted buildings, and it rarely lodges in hollow trees. In all these respects it resembles most the brown owl. Nor is it entirely a bird of night; but sees much better in the day than the other nocturnal birds, and even chases the swallows and other small birds, though with very little success. It is more fortunate in the search for mice, which it swallows, not entire, but tears them in pieces with its bill and claws; and it plucks the birds neatly before it eats them; in which instinct it differs from the other owls. The specific character of the little owl, *Strix passerina*, is "That its head is smooth, and the feathers of its wings marked with five orders of spots." It is very rare in England. In North America it is found from Hudson's-bay to New York, and called by the Esquimaux *shipmospitl*. They build always in the pines, and in the middle of the tree, and lay two eggs; remain mostly solitary in the day, but are active in the search of their prey during the night.

Synonymes.---La cheveche, ou petite chouette, Buff. *Strix passerina*, Linn. Gmel. Scop. Brun. Mul. Kram, &c. *Noctua minor*, Ray, Will. and Klein. La civetta, Olin. and Zinn. The Greeks and Romans seem to have had no name appropriated to this species; and probably they confounded it with the scops owl, or *asio*. This is the case in the modern languages: both are termed *zuetta* or *civetta* in Italian; *sechuzza* in Spanish; *mocho* in Portuguese; *kautzlein* in German; and *szowa* in Swedish.

THE CABURE OWL.

THIS bird is named *caboor* by the Indians of Brazil, which has tufts of feathers on its head, and which is not larger than the juniper thrush. Marcgrave describes it to be of the size of a fieldfare; its head round; its bill short, yellow, and hooked, with two holes for the nostrils; the eyes beautiful, large, round, and yellow, with a black pupil; under the eyes, and on the side of the bill, are long brown hairs; the legs are short, and they, as well as the feet, are clothed completely with yellow feathers; the toes commonly four in number, with nails that are semilunar, black and sharp; the tail broad, the wings terminating at its origin; the body, the back, the wings, and the tail, are of a pale dusky colour, marked on the head and neck with very small white spots, and on the wings with larger spots of the same colour; the tail is waved with white; the breast and belly of a whitish-grey, clouded with light brown. Marcgrave adds, that this bird is easily tamed; that it can bend its head, and stretch its neck so much as to touch with the point of its bill the middle of its back; that it frolics with men like a monkey, and makes several antic motions; that it can erect the tufts on the sides of its head so as to represent small horns or ears; and that it feeds upon raw flesh.

Synonymes.---The *cabure* is the *brasilian-eared owl* of Latham; *strix brasiliensis* of Gmelin; the *asio brasiliensis*

filiensis of Brisson; the *noctua brasiliensis* of Ray; and the *ulula brasiliensis* of Klein. Specific character: "Its head eared; its body dusky-ferruginous spotted with white; below whitish, with dusky ferruginous spots; the tail-feathers striped with white."

THE FUNEREA OWL.

THIS species is scarcely larger than the sparrow-hawk, and the length of its wings and tail give it a similar appearance. The shape of its head and feet however shews, that it is more nearly allied to the genus of owls; but it flies and catches its prey in broad day, like the other rapacious diurnal birds. Its bill is like that of the sparrow-hawk, but not cornered on the sides; it is glossy and orange-coloured, covered almost entirely with hairs, or rather small ragged grey feathers, like most of the owls; the iris is orange, the eyes encircled with white, and shaded with a little brown, speckled with small longish dusky spots, and on the outside of this white space is a black ring, which extends as far as the ears; beyond this black circle there is again some white; the crown of the head is deep brown, mottled with small white round spots; the arch of the neck and its feathers, as far as the middle of the back, are of a dull brown, edged with white; the wings are brown, and elegantly spotted with white; the scapular feathers are barred transversely with white and brown; the three feathers next the body are not spotted, but only bordered with white; the lower part of the back and the rump are of a deep brown, with transverse stripes of lighter brown; the lower part of the throat, the breast, the belly, the sides, the legs, the rump, and inferior coverts of the tail, and the smaller inferior coverts of the wings, are white, with brown transverse ribs, but the larger coverts of the wings are of an obscure ash-colour, with white spots on the two edges; the first of the quill-feathers of the wing is entirely brown without the least spot or border of white,

white, and is not in the least like the rest of the quill-feathers, as may be remarked also in the other owls; the feathers of the tail are twelve in number, of an ash-colour below, and a dull brown above, with white narrow transverse bars; the legs and feet are covered with fine soft feathers, white like those of the belly, barred with shorter and narrower brown lines; the nails are hooked, sharp, and of a deep brown colour.

Synonymes.--This is the *strix funerea* of Linnæus and Muller, the *strix canadensis* of Brisson, and the *Canada owl* of Latham. It flies high like a hawk, and preys by day upon the white grouse. It attends the fowler, and often steals the game before he has time to pick it up. It is found in North America, in Denmark, and Sweden, and is very frequent in Siberia.

THE HARFANG, OR GREAT WHITE OWL.

THIS bird inhabits the northern parts of both continents, and is known by this name in Sweden. It is not furnished with tufts on the head, and it is still larger than the great-horned owl. Like most northern birds, its colour is snowy-white. Edwards describes it as follows: "The great white owl is one of the largest of the nocturnal birds of prey, and at the same time it is the most beautiful, for its plumage is white as snow: its head is not so large in proportion as that of the owls; its wings, when spread, measure 16 inches from the shoulder to the end of the longest feather, which may give an idea of its bulk. It is said to prey in open day upon the white grouse about Hudson's Bay, where it remains the whole year. Its bill is hooked like a hawk's, and has no corners on the edges; it is black, and perforated with wide nostrils, and is also almost entirely covered with stiff feathers, similar to the bristles at the base of the bill, and reflected outwards. The pupil is encircled by a brilliant-yellow iris; the head, the body, the wings, and the tail, are marked

marked with small brown spots. The higher part of the back is transversely barred with some brown lines, the sides below the wings are also barred in the same manner, but by narrower and lighter lines: the great feathers of the wings are spotted with brown on their outer edges; there are spots also on the coverts of the wings, but the inferior coverts are pure white. The legs and feet are covered with white feathers; the nails are long, strong, black, and very sharp."

This bird is common in the country about Hudson's Bay; but it seems to be confined to the northern tracts; for in the New Continent it is very rare; in Pennsylvania and in Europe it never appears farther south than Dantzick. It is almost white, and spotless in the mountains of Lapland. Klein informs us, that it is named *hurfang* in Sweden, and *weissebunte schlichteteule* (i. e. white-chequered smooth owl) in Germany; and that he had in Dantzick a male and female alive for several months in 1747. Ellis relates, that this bird and the great-horned owl are frequent in the tracts near Hudson's Bay: it is, says he, of a dazzling white, hardly distinguishable from snow; it appears the whole year, flies often in open day, and hunts white partridges, (*grouse*.) On the whole, therefore, the *harfang*, which is the largest of all the owls, is most frequent in the northern regions, and probably avoids the heats of the south.

It is found in Pennsylvania, and probably in Iceland; for Anderson has given a figure of it in his description of Iceland; and though Horrebow, who has criticised that work, asserts that no kind of owl is found there, yet this ought not to be admitted upon the single credit of one whose principal aim it seems is to contradict Anderson.

Synonymes.---This is the *strix nyctea* of Linnæus, &c. the *ulula alba* of Klein, the *white owl of Hudson's Bay* of Brisson, the *great white owl* of Edwards, and the *snowy owl* of Pennant and Latham. The specific character,

character, "the head smooth, the body whitish, with dusky lunar spots dispersed."

THE CAYENNE OWL.

THIS bird is of the size of the tawny owl, from which it differs by the colour of its eyes, which are yellow; so that it is equally related to the white owl, but really differs from both. It is particularly remarkable for its rufous plumage, waved transversely with brown narrow lines, not only on the breast and belly, but even on the back; its bill is of a flesh colour, and its nails black. Specific character: "The body striated with rufous, waved transversely with dusky colour; the irides yellow." Synonymes.---Le chat-huant de Cayenne, *Buff.* *Strix cayanensis*, *Gmel.*

Dr. Latham says it is twenty-one inches in length; the upper parts of the body of a reddish colour; the lower parts of a rufous white: the head and neck are white, and not so full of feathers as those of owls generally are, and from this circumstance it appears not unlike a hawk: a large patch of dark brown surrounds each eye, giving the bird much the appearance of wearing spectacles; the legs are covered with feathers quite to the toes, and are of a yellowish colour. A specimen of this curious bird may be seen in the Leve-rian museum.

THE CANADA OWL.

This is considered by Brisson as a specimen of the tawny owl, but it appears to be more allied to the brown. It differs from the latter, however, because its breast and belly are marked with regular brown cross bars; and this singular property is also observed in the little owl of America. Specific character: "The head smooth, the body dusky spotted with white, streaked below with white and dusky, the wing feathers variegated with white spots, the tail feathers streaked

streaked with white." Its length seventeen inches, and its alar extent two feet. It weighs twelve ounces.

Synonymes.---La chouette, ou grande cheveche de Canada, *Buff.* *Strix funerea*, *Linn.*

THE SAINT DOMINGO OWL.

THIS bird comes from St. Domingo, and seems entirely a new species. It is the nearest related to the European owl. Its bill is larger, stronger, and more hooked, than that of any other earless owl. It differs from the brown owl in another circumstance also; its belly is of a rusty uniform colour, and there are only some longitudinal spots on the breast; whereas the brown owl of Europe is marked on the breast and belly with large oblong pointed spots, which has given occasion to the name of *flaming owl*, *noctua flammeata*. Specific character: "The head smooth, the abdomen rufous, the breast marked with straggling longitudinal spots." Synonymes.---La chouette, ou grande cheveche de Saint-Domingue, *Buff.* *Strix Dominicensis*, *Gmel.*

The following thirteen species are also newly discovered, and are omitted in Buffon, Linnæus, Latham, &c. The Virginian eared owl, *strix Virginianus*. The Ceylonefe eared owl, *strix Ceylonensis*. The Chinese eared owl, *strix sinensis*. The Coromandel eared owl, *strix Coromanda*. The Scandinavian eared owl, *strix Scandiaca*. It lives in the mountains of Lapland, and is as large as a peacock. The mottled owl, *strix nevia*; from New York. The Indian eared owl, *strix bakkamuna*; from Ceylon. The Siberian eared owl, *strix pulchella*. The wapachtu owl, *strix wapachtu*; from Hudson's Bay. The cinereous owl, *strix cinerea*; from Hudson's Bay. It flies in pairs. The Swedish owl, *strix tengmalmi*. The Acadian owl, *strix Acadica*; from North America. The New Zealand owl, *strix fulva*.

LANIUS, THE SHRIKE, OR BUTCHER-BIRD,
of the order of ACCIPITRES.

THIS genus, which is stiled by the French *pie gresche*, closes the list of rapacious birds; and connects them in the great chain of nature with the order of pies, which succeeds. They are allied to the former, by the strength and crookedness of the bill, and by their predatory life; to the latter, by the form of their toes, the shape of their tail, and their capacity of feeding upon insects, when there is a deficiency of flesh. There are many different species of this bird in both the Old and New World; it is an inhabitant of every climate, the arctic regions excepted. The distinguishing characters of this genus are the following: bill pretty straight, with a tooth on each side near the tip, and naked at the base; the tongue jagged; and the middle toe connected to the first joint. There are fifty-three species, besides several varieties.

These birds are easily distinguished, even at a distance, by their associating together in families, after the young are capable of flight. In this respect, they differ remarkably from the predatory birds already described, who generally banish from the nest their young, while they are yet incapable of providing for themselves. The female butcher bird provides for her young with the most affectionate care: she at first feeds them with insects, and afterwards accustoms them to small morsels of flesh, which the male supplies with wonderful attention. When the offspring grows up, the parental regards do not cease: the old associate with the young during the whole autumn and winter, without assembling in larger flocks. They make the safety of the family a common interest; they live together in peace, and chase their prey in concert. It is only the powerful call of love that break the ties of
this

this family attachment, and separates the young from their parents to rear families of their own.

Though of a small size and apparently slender in the form of their body and limbs, these birds have a just claim to be ranked among the rapacious tribes, and even among the most bold and sanguinary of that order. Their bills are large, strong, and hooked at the end; their appetite for flesh is decidedly ascertained, and they are perhaps the most fierce of all birds. One is astonished to witness the intrepidity with which a small butcher-bird maintains the conflict against the pies, crows, hawks, and other animals far beyond it in size: Not only does he engage in self-defence, but often also attacks, and almost always with success, especially when the pair unite in driving these hostile tribes from their young. He waits not till they approach; it suffices, that they pass within his view; for as often as they do he intercepts them, and falls upon them with loud cries; cruelly wounds, and beats them off with such fury, that they seldom venture to return. In this unequal combat, it is seldom he succumbs to superior strength, or allows himself to be carried off: his own death, and that of his adversary, puts an end to the contest; for they are sometimes, after their battles, seen to fall together upon the same field.

Nothing in nature displays the power and the rights of courage more strikingly, than this small animal. The most formidable birds of prey, even those four times his size, respect him. The kite, the buzzard, and the raven, rather seem to dread than seek an engagement with him. Although some of the species is scarcely larger than a lark, yet he, singly, wages war with the hawks and falcons, and hunts within their territories without fearing their resentment. The butcher-bird kills partridges, young hares, and small birds, which it seizes by the throat and strangles. It is said, that, when it has thus killed its prey, it fixes it upon the point of a thorn, and tears it, when thus

spitted, to pieces. It is supposed, that as nature has not given this bird strength sufficient to tear its prey with its feet, as the hawks do, it makes use of this extraordinary expedient.

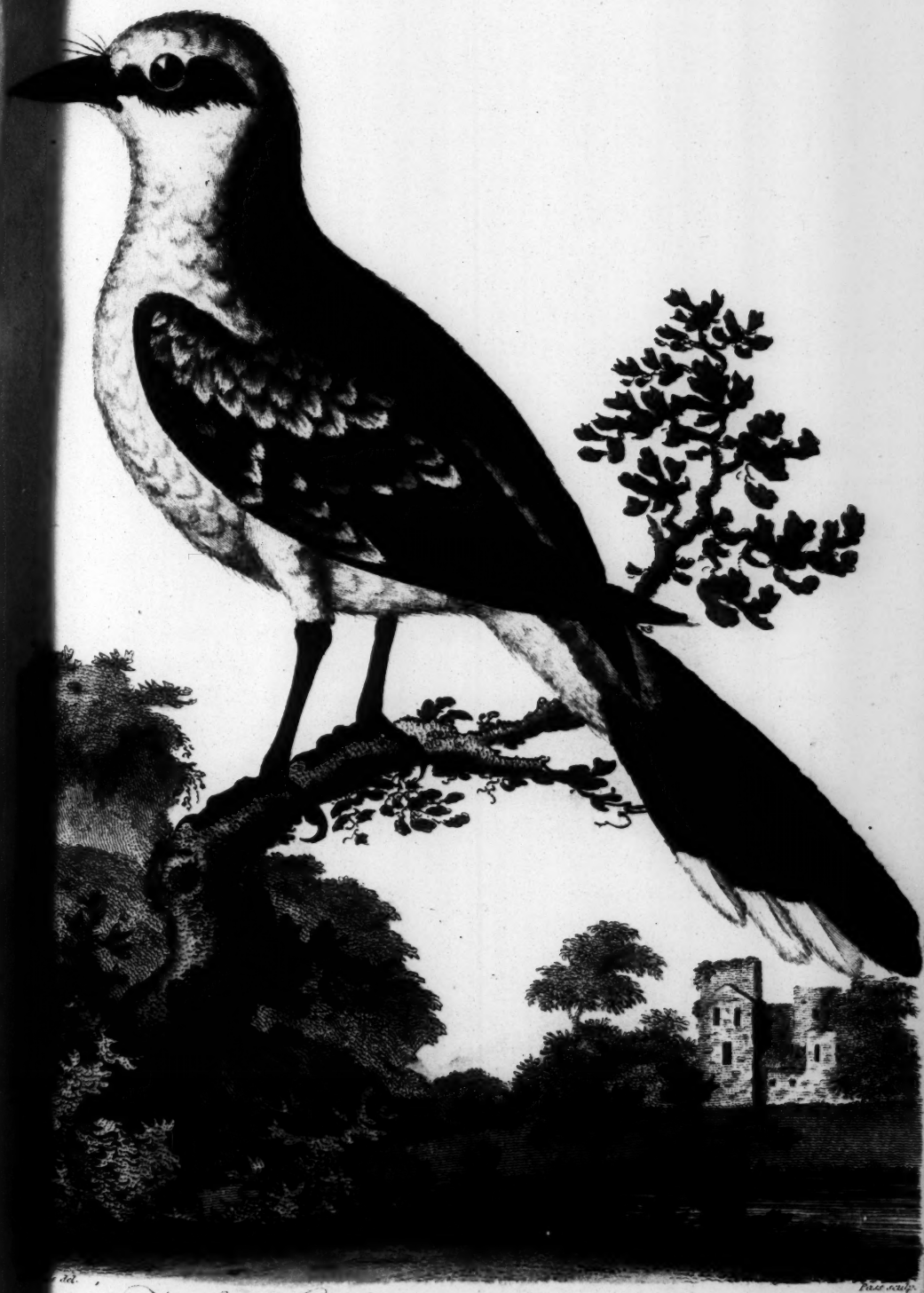
Some of the butcher-birds migrate; those which remain in the country all the year, inhabit the woods and high mountains. The larger kinds build upon tall trees, in the fork of a branch; the smaller, in the hedges and thickets. They lay from six to eight eggs, about the size of those of the thrush. The nest, upon the outside, is composed of white moss, interwoven with blades of grass; the inside is thickly lined with wool.

THE GREAT CINEREOUS SHRIKE, OR BUTCHER-BIRD.

THIS bird inhabits the woods and mountains in summer, and resorts to the plains and near dwellings in winter. It breeds among the hills, either on the ground or on the loftiest trees. Its nest is composed of white moss interwoven with long grass, and well lined with wool, and is commonly fastened to the triple cleft of a branch. The female, which differs not from the male in point of size, and is only distinguished by the lighter cast of its plumage, lays generally five or six eggs, sometimes seven, or even eight, as large as those of a thrush. The shrikes may be distinguished both by their flying in a zig-zag course, which waves not sideways, but bends with sudden flexures upwards and downwards; also by their shrill cry, which can be heard at a great distance, and which they incessantly repeat when perched on the summits of trees.

In this first species there is a variety in the size, and another in the colour. Some are found entirely white on the Alps, which, as well as those with a rufous tinge on the belly, are of the same size with the great cinereous shrike, and it does not exceed the red-wing. The first of these is the *lanus albus* of Aldrovandus; and

it



The Great Cinereous Shrike, or Butcher Bird.

Published by J. Moore, 1788.



it is the second variety of Linnæus: Its body white; its feet yellowish; the bill and nails blackish. The second is the *lanius major*, Gefner; and the *groesferer neuntoeder* of Frisch. It is the third variety of *lanius excubitor*, Linn. It is larger and thicker than the former; the scapular feathers, and the small coverts of the upper side of the wing, are rusty-coloured: but these differences are too minute to constitute a separate species.

Others are found in Germany and Switzerland which are somewhat larger, and which several naturalists have reckoned a different species; yet in other respects these birds are similar, and their growth might be affected by the plenty or scarcity of subsistence which the country affords. And if the great cinereous shrike varies somewhat in Europe, we may expect it to vary still more in remote climates. That of Louisiana is the same with the common kind, differing less than the Italian bird; only it is rather smaller, and of a deeper cast on the upper parts of the body. Those from the Cape of Good Hope and Senegal, and the blue shrike from Madagascar, appear to be three contiguous varieties, and equally related to the great cinereous shrike of Europe. The only differences are, that in the one from the Cape, the upper parts of the body are of a blackish brown; in that from Senegal, they are of a lighter brown; and in that from Madagascar, they are of a fine blue: but such differences of plumage may still have place in the same species, for we shall have frequent occasion to point out as great changes produced in our own climates, and the variations ought to be still greater in distant regions. The shrike from Louisiana resembles that of Italy; and the temperature of these countries is nearly alike. The others, from the Cape, Senegal, and Madagascar, bear less analogy; and the climates to which they belong are also different. The shrike from Cayenne is variegated with long brown bars; but, the size and other properties being

being the same, we have ranged it likewise with the common kind. To this species we must also refer the East-India bird which the English that visit the coasts of Bengal term the *dial-bird*, and which is described by Albin with figures of the cock and hen. "This shrike is very large, he says, and very similar to the great cinereous shrike; its bill black, the corners of the mouth yellow, the iris of the same colour, the legs and feet brown. In the male, the head, the neck, the back, the rump, and the coverts of the upper side of the tail, the scapular feathers, the throat, and the breast, are black; the belly, the flanks, and the coverts of the under-side of the tail, white; all the feathers of the tail of an equal length, black above and white beneath. The female is distinguished from the male by its fainter colours." In the spring and summer it imitates the voice of other birds, by way of decoying them within reach, that it may destroy them; but beyond this, the natural note is the same throughout all seasons. If a trap-fall be baited with a living small bird, it proves a decoy, by which it may be taken in winter. It is observed to be mute when kept in a cage, though seemingly content. In countries where they are plenty, the husbandmen value them, on supposition of their destroying rats, mice, and other vermin. They are supposed to live five or six years; and are often trained up for catching small birds in Russia. In Carniola they are migratory, coming in May and departing in September; which is the case also in respect to the few which are met with in England.

Specific character of the great cinereous shrike, *lanius excubitor*, Linn. "The tail wedge-shaped, its lateral quills white; the back hoary; the wings black, with a white spot." Its length is ten inches, its breadth across the wings fourteen inches, and it weighs three ounces. It seizes small birds by the throat, and strangles them; then spits them on
some

some thorn, and tears them to pieces with its bill. Even when confined in a cage, it sticks its meat against the wires, and tears it in the same manner. It is frequent in Russia, but seems not to have penetrated to Siberia. It inhabits the whole extent of North America. In Hudson's Bay it breeds in the woods distant from the coast. It makes its nest with grass, which it lines thick with feathers.

Synonymes.---La pie-grieche grise, *Buff.* *Lanius excubitor*, *Linn.* *Brun. Kram.* *Falco congener*, *Klein.* *Lanius*, seu *collurio cinereus major*, *Ray* and *Will.* *Briff.* and *Fris.* *Ferlotta berettina*, *Zinn.* *Castrica palombina*, *Olin.* *Il falconetti*, *Cett.* The greater butcher-bird, or matticefs; in the North of England wierangle, *Will.* The night jar, *Mort. North.* The butcher bird, murdering bird, or shreek, *Mer. Pinax.* In modern Greek it is called *collurio*; the Latin name *lanius* signifies a *butcher*. In Italian it is termed *gaza sperviera*, *falconello*, *crestò*, *castrica*, *verla*, *stragazzina*, *ragazzoia*: in German, *thorn-kretzer*, *warkengel*, *nunmaerder*: in Polish, *zierzba*, *strokos*, *wiekfzy*.

THE WOODCHAT, OR RUTILOUS SHRIKE.

THIS bird is rather smaller than the preceding, and may easily be distinguished by the tinge of its head, which is sometimes red, and commonly bright-ferruginous; its eyes also are whitish or yellowish, while in the great cinereous shrike they are brown, and its bill and legs are blacker. Its instincts, however, are nearly the same; both of them are bold and mischievous, yet they are evidently of different species; for the great cinereous shrike is a permanent settler, while the woodchat quits the country in autumn, and returns not till spring. The family, which does not disperse after the young are fledged, departs alone in the beginning of September; they flutter from tree to tree, and support not a continued flight even in their migrations. They reside during summer in the plains, and nestle on

the bushy trees; in that season the great cinereous shrike inhabits the forests, and seldom emerges from the retreat till after the departure of the woodchat. The male and female are almost exactly of the same size, but differ so much in their colours as to appear of distinct species. They construct their nest very neatly, and employ the same materials as the great cinereous shrike; the moss and wool are so well connected with small pliant roots, long fine grass, and the tender shoots of low shrubs, that the whole seem interwoven. It has generally five or six eggs; sometimes more; these are of a whitish ground, and either entirely or partly spotted with brown or fulvous. The woodchat, *Lanius rutilus*, of Latham, is thus described: "Its upper side consists of three colours, its under side is rufous-white; the whole of the scapular feathers, the quills of the tail from the base to the middle, and the iris of the lateral ones, white; and a black streak through the eyes." It includes the *lanus rufus* of Gmelin, which is the third variety of the *lanius collurio* of Linnæus, and also the *lanius pomeranus*, first described by Sparman."

Synonymes.---La pie-grieche rousse, *Buff.* *Lanius rutilus*, *Lath.* *Lanius rufus*, *Briss.* and *Gmel.* *Lanius pomeranus*, *Mus. Carls.* *Lanius minor cinereus*, *Ray*, *Klein. Fris.* *Ampelis dorso griseo*, *Faun. Suec. ed. 1.* and *Kram.* *Buferola, ferlotta bianca*, *Zinn.*

THE COLLURIO, OR LESSER BUTCHER-BIRD.

THE collurio, or lesser butcher-bird, is seven inches and a half in length. The irides are hazel; the bill resembles that of the preceding species: the head and lower part of the back are of a fine light grey: across the eyes from the bill runs a broad black stroke: the upper part of the back, and coverts of the wings, are of a bright ferruginous colour; the breast, belly, and sides, are of an elegant blossom colour: the two middle

the feathers of the tail are longest, and entirely black; the lower part of the others white, and the exterior webs of the utmost feather on each side wholly so. In the female, the stroke across the eyes is of a reddish brown; the head of a dull rust colour mixed with grey; the breast, belly, and sides, are of a dirty white, marked with semicircular dusky lines: the tail is of a deep brown; the outward feather on each side excepted, whose exterior webs are white. It is rather larger than the male. It lays six white eggs marked with a rufous brown circle towards the large end. The nest is generally in a hedge or low bush; near which, it is said, no small bird chooses to build; for it not only feeds on insects, but also on the young of other birds in the nest, taking hold of them by the neck, and strangling them, beginning to eat them first at the brain and eyes. It is fonder of grasshoppers and beetles than of other insects, which it eats by morsels, and, when satisfied, sticks the remainder on a thorn; when kept in a cage, it does the same against the wires of it, like the former species. It is called in the German language by a name signifying "great head," or "bull head," from the size of that part. It will also feed on sheep's kidneys, if in a cage, eating a whole one every day. Like the cinereous shrike, it only mocks the notes of other birds, having none of its own; and this merely, like that, to decoy. It is said to be in this imitative art an adept; if money is counted over at midnight in the place where one of these is kept, so as to make a jingling noise, it begins to imitate the same sound. When sitting on the nest, the female is soon discovered; for on the approach of any one, she sets up an horrible outcry.

The specific character of this species, which is the red-backed shrike, *lanius-collurio* of Linnæus, is as follows: "Its tail somewhat of a wedge-shape, the back grey, the four middle quills of the tail of an uniform colour, the bill lead-coloured." It is seven inches

and a half long, its alar extent eleven inches; the male weighs two ounces, the female two ounces and two grains; it inhabits Europe, and is migratory, appearing in May, and returning in September or October.

Synonymes.---L'Ecorcheur, *Buff.* *Lanius-collurio*, *Linn. Gmel. Briss. Brun. Kram. &c.* *Lanius minor rufus*, *Ray* and *Will.* *Lanius Æruginosus major*, *Klein.* *Ferlotta rossa*, *Zinn.* The lesser butcher bird called in Yorkshire *flusher*, *Will.*

THE FORK-TAILED SHRIKE.

EDWARDS describes this bird in the following terms: The shape of its bill, the whiskers at its base, and the strength of its legs, have induced me to range it with the shrikes; though its tail is different, being forked, while that of the shrike has the longest feathers in the middle. Its bill is strong, thick, and arched, nearly like that of a sparrow-hawk, but longer in proportion to its thickness, less hooked, and with wide nostrils. The base of the upper mandible is beset with stiff hairs. The whole of the head, neck, back, and the coverts of the wings, are of a shining black, with reflections of blue, purple, and green, varying according to its position. The breast is of an ash-colour, dusky, and blackish. All the belly, the legs, and the coverts of the under side of the tail, are white; the legs, the feet, and the nails, are blackish brown. It inhabits Bengal, where it is called *fangab*. It is called also by the Indians the king of the crows, from its pursuing these birds from place to place with a great noise, and pecking them on the back till they escape.

The specific character: "The tail forked, the body cœrulean black, the abdomen white." Synonymes.---Le fangab, *Buff.* *Lanius cœrulescens*, *Linn.* *Lanius bengalensis cauda bifurca*, *Briss.* and *Klein.* The forked-tail butcher-bird, *Edw.*

THE BENGAL SHRIKE.

THIS is an East-Indian bird. It is described and figured by Albin. It is nearly of the same size as the great cinereous shrike of Europe; its bill is cinereous brown; its iris whitish; the upper part and the back of the head, black; below the eyes is a lively orange spot terminated with white; and on the tail four black spots, making a segment of a circle; the upper part of the neck, the back, the rump, the superior coverts of the tail, the inferior coverts of the wings, and the scapular feathers, are brown; the throat, the upper part of the neck, the breast, the higher part of the belly, and the inferior coverts of the tail, are red; the tail is light brown; the feet and nails are black.

The specific character: "It is grey, white beneath, the temples and rump red." It is five inches and a half long. Synonymes:---Rouge-queue, *Buff.* *Lanius-emeria*, *Linn.* and *Gmel.* *Lanius bengalensis fuscus*, *Briss.* The Indian redstart, *Edw.* The Bengal redstart, *Alb.*

LANGARIEN AND TCHA-CHERT.

THE langarien is a native of Manilla; and the tcha-chert comes from Madagascar. Their wings extend beyond the tail; while, in the other species, they do not reach so far as the tail. But the one from Madagascar resembles much the great cinereous shrike; and, setting aside the difference of the length of the wings, we may consider it as the intermediate shade between that and the Manilla bird, to which it is nearer related. The langarien is the *lanius leucorhynchus* of Gmelin, and the *white-bellied shrike* of Latham. Its specific character: "Blackish above, whitish below; the bill, breast, abdomen, and rump, white." It is seven inches long. The cha-chert is the *lanius viridis* of Gmelin, and the *green shrike* of Latham. Specific

188 NATURAL HISTORY

fic character: "The upper surface of the head, body, and wings, dull green; the body white beneath, the tail black." The length near six inches.

THE CAYENNE SHRIKE.

TWO of these birds were sent; the one under the name of the grey shrike, the other under that of the spotted shrike. Their bill is large and red; their head is entirely black; and their size exceeds that of the European shrikes, though they resemble these on the whole more than any birds of our latitudes. They seem to be the male and female of the same species. The specific character: "Cinereous, the head, the quills of the wings, and the primaries of the tail, black." It is of the size of the blackbird, being eight inches and a half long. Synonymes.---Becarde, *Buff.* *Lanius Cayanus*, *Linn. Gmel.* and *Briss.*

THE YELLOW-BELLIED SHRIKE.

THIS bird has a long bill like the preceding; and therefore related to it. Indeed, the only difference consists in the colour of the plumage. Specific character: "Dusky; yellow beneath, the head blackish, and encircled by a whitish stripe." It is near nine inches in length. Synonymes.---Becarde à ventre jaune, *Buff.* *Lanius sulphuratus*, *Linn.* and *Gmel.* *Lanius Cayenensis luteus*, *Briss.*

THE HOOK-BILLED SHRIKE.

THIS bird was sent from Madagascar by Poivre under the name of *vanga*. Though considerably different from the shrikes, it seems to be more related to them than any other birds of Europe. It bears a resemblance to the two preceding. Specific character: "The tail wedge-shaped, the body white, the back black, the five first quills of the wings marked with a white spot." It feeds upon fruits. It is ten inches long. Synonymes.---Le *vanga*, ou becarde à ventre jaune,

jaune, *Buff.* *Lanius curvirostris*, *Linn.* and *Gmel.*
Collurio madagascariensis, *Briss.* *Lanius major nigro*
et albo mixtus, *Gerin. Orn.*

THE RUFOUS SHRIKE.

THIS also came from Madagascar. It is much like the preceding, and, did not the distance of the countries preclude the idea, we might suppose them to constitute the same species. The rufous shrike is less removed from the European shrikes than those of Cayenne, for its bill is shorter. Specific character: "Rufous, white beneath, the head greenish-black." It is about eight inches long. Synonymes.---Schet-bé, *Buff.* *Lanius rufus*, *Linn.* and *Gmel.* *Lanius madagascarensis rufus*, *Briss.*

THE WHITE-HEADED SHRIKE.

THIS seems to be a proximate species of the preceding, or perhaps a variety of age or sex, its bill only being somewhat shorter and less hooked, and its colours rather differently distributed. Indeed all these five birds with thick bills might form a small separate genus. Specific character: "Head white, the upper side of the body is a greenish-black, and beneath black; the bill, feet, and nails, lead-coloured." It is eight inches long. Synonymes.---Tcha-chert bé, *Buff.* *Lanius leucocephalus*, *Gmel.* *Lanius madagascariensis major viridis*, *Briss.*

THE BARBARY SHRIKE.

THIS bird comes from Senegal, where the negroes, as Adanson informs us, call it *gonolek*, that is, *feeder on insects*. It is painted with the most vivid colours: it is nearly of the same size as the European shrike, and scarcely differs in any thing but the distribution of its tints, which is however nearly similar to what has place in the great cinereous shrike of Europe. Specific character: "Black, beneath red, the crown and thighs

190 NATURAL HISTORY.

thighs fulvous." It is about nine inches long. Synonymes. *Le gonolek*, *Buff.* *Lanius barbarus*, *Linn.* and *Gmel.* *Lanius senegalensis ruber*, *Briff.*

THE MADAGASCAR SHRIKE.

BOTH the male and female of this bird were sent from Madagascar by Poivre; the former under the name of *cali-cali*, and the latter under that of *bruia*. We might, on account of its smallness, refer it to the genus of the European red-backed shrike; but it differs so much, that it ought to be regarded as a distinct species. Specific character :---" Cinereous, beneath whitish, the lines between the bill and the eyes black, the quills of the wings tawny." It is five inches long, and about the size of a sparrow. Synonymes.---*Lanius madagascarensis*, *Linn.* *Gmel.* and *Briff.*

THE CRESTED SHRIKE.

THIS bird, which was brought from Canada, has on the crown of its head a soft crest, with long feathers that fall backwards. It is similar to our woodchat in the distribution of its colours, and may be regarded as a contiguous species, differing scarcely in any thing but the crest and the bill, which is rather thicker. It is six inches and a half long; and sometimes wants the crest. Specific character :---" The tail is wedge-shaped, the head crested, the body tawny, and below waved with fulvous, and dusky." Synonymes.---*Pie-grièche huppée.* *Lanius canadensis.*

THE ANTIGUA SHRIKE, OR SMALLEST BUTCHER-BIRD.

THIS species is about the size of a lark. Its bill is large and black; the upper mandible long, and hooked; the head is black; the back, of a yellowish rufous colour: the throat and breast are white; the quills, and bastard wing-coverts, black; and the wings reach only to the beginning of the tail, which is very long and wedge-shaped; the two middle feathers are wholly



W. A. S.

Barlow sculp.

The Antigua Shrike, Cock & Hen?

Painted as the Act. Sh. by J. Withers, July 17, 1808.



wholly black; the legs are dusky black. It inhabits Panay, one of the Philippine islands, but principally about Antigua. The hen differs from the cock, in that she hath no black mark about her eyes; and she hath not the rose-coloured tincture on her breast.

THE JOCOSUS, OR JOCOSE SHRIKE.

THE jocosus is in length seven inches and a half. The bill is blackish, rather straighter than in most of the genus, and furnished only with a very fine notch near the tip: the crown of the head is black, except some long brown feathers, which form a kind of crest: the sides of the head, throat, and fore part of the neck, are white; from each corner of the mouth there is a black line, continued backwards; and under each eye is a small spot of lively red: the upper parts of the body are brown; the under parts, dirty white; the vent, rose-colour: on the lower part of the neck and breast there is a kind of a brown band: the quills are brown: the tail is greatly wedge-shaped, and in colour brown, except the four outer feathers on each side, which have white tips: the legs and claws are black. This is a Chinese bird, and called in those parts by the name of *kowkai-kon*. It feeds upon rice and insects, particularly cockroaches.

THE ROCK SHRIKE.

THE infaustus, or rock shrike, is in length about eight inches. The bill is about an inch long, and blackish: the head and neck are of a dark ash-colour, marked with small rufous spots: the upper part of the back is a dark brown; the lower much paler, inclining to ash, especially towards the tail: the quills and wing-coverts are dusky, with pale margins: the breast, and under parts of the body, are orange, marked with small spots, some white and others brown: the tail is three inches in length; the two middle feathers are brown, the others rufous: the legs are blackish: the wings and
tail

tail are even. This is the description of the female. The male is said to differ very little, except in being of a brighter colour. This species is met with in many parts of Europe, from Italy on the one hand; to Russia on the other; and is found in some parts of Germany, the Alpine mountains, those of Tyrol, and such-like places. The manners of this bird seem disputed. Buffon says that it perches on a high stone, and as soon as a marksman appears with his gun removes to a greater distance, and so on as often as he approaches; which renders this species difficult to come at. Brunnich and Linnæus, on the contrary, say that it is a bold bird, attending the traveller while at his meal, on purpose to feed on his scraps. It has an agreeable note, approaching to that of a hedge-sparrow, and will also learn to imitate that of others. It makes the nest among the holes of the rocks, &c. hiding it with great art; and lays three or four eggs, feeding the young with worms and insects, on which it also feeds itself. It may be taken young from the nest, and brought up as the nightingale.

THE FAUSTUS, OR WHITE-WREATHED SHRIKE.

THE white-wreathed shrike, is about the size of a common thrush. Its bill is pale: the upper parts of the body are grey; the under ferruginous: from the eyes to the hind head there passes a whitish line, composed of numerous white feathers, rendering it truly characteristic: the wings are rounded; the quills brownish, with grey edges, which are crossed with numerous slender brown lines: the tail is rounded, brown, and crossed with numerous bars of darker brown: the legs are pale. This elegant species inhabits China, where it is known by the name of *whommaj*. It may be observed, among others, in Chinese paper-hangings, where the white line seems to encompass the back part of the head like a wreath.

THE

THE DOMINICAN SHRIKE, OR PIED BUT-
CHER-BIRD.

THE Dominican shrike is bigger than a sparrow, and rather longer. The bill is greyish, conical, and strong; the base beset with bristles, pointing forwards: the head, neck, breast, back, wings, and tail, are black; the belly and rump white: the wings reach near an inch beyond the middle of the tail: the thighs are black. It inhabits the Philippine islands, and is a bold courageous bird: it flies very quick, and with great rapidity; frequently hovering in the air like a swallow. It is a great enemy to the raven; to whom, though much bigger, he bids defiance, and even provokes him to combat: the battle often lasts half an hour, and ends with the retreat of the raven; rather, perhaps, from being teased out than much injured by the little enemy.

THE NENGETA, OR SURINAM SHRIKE.

THE nengeta is in length nine or ten inches. Its bill is dusky, and beset with bristles at the base: the irides are sapphire-coloured; and from the angles of the mouth, through the eyes, there runs a black streak: the upper parts of the body are of a dark brownish ash-colour; the under parts cinereous white: in the middle of the wing are a few white feathers: the quills and tail are nearly black; and all the feathers of the last, except the two middle ones, are obliquely tipped with white: the legs are of a dark ash-colour; the claws black.---These birds are found at Surinam and Brasil. They are common likewise at Guiana, where they frequent watery places, and are found in great numbers together. They are observed, at frequent intervals, to set up a great cry all together; which affords a happy and certain presage to the thirsty traveller, in the immense forests of Guiana, of water being at hand.

THE TYRANT SHRIKE, OR BUTCHER-BIRD.

THE tyrannus is about the size of a thrush. Its bill is a blackish brown, beset with bristles at the base: the irides are brown: the upper parts of the plumage grey brown; the under, white: the breast inclines to ash-colour: the head is blackish on the upper part; the base of the feathers on that part in the male is orange, but seldom visible except it erects the feathers, when there appears a streak of orange down the middle of the crown: the tail is brown, margined with rufous: the legs and claws are black brown. The female scarcely differs, except in the head; the base of the crown feathers being yellow instead of orange; the colours are not quite so deep, and it is a trifle less in size. It inhabits Virginia.---There is a variety which inhabits St. Domingo and Jamaica. These birds are called *titiri*, *pipiri*, or *quiquiri*, from their cry, which resembles those words. The first is called the *black-headed* or *great-billed pipiri*; the second, the *yellow-headed pipiri* or *pipiri of passage*. The first though in plenty are seldom seen but in pairs; the second in great troops, about the month of August, when they are very fat, and killed in great numbers for the table, as their flesh is accounted good eating.---All authors agree in the manners of these birds, which are ferocious to a great degree while the hen is sitting: no bird whatever dares approach their nest: they will attack the first which comes near, without reserve, and usually come off conquerors. From hence by some they are called *king-birds*.

The following twenty species have been lately discovered; and have not yet appeared in other systems of Natural History; viz. The chestnut-backed shrike, *lanius castaneus*. Rufous-tailed shrike, *lanius phœnicurus*. Surinam shrike, *lanius atricapillus*. Magpie shrike, *lanius leverianus*; from South America. Black shrike, *lanius niger*; from Jamaica. Chinese shrike,

lanius

lanius Schach. Pacific shrike, *lanius pacificus*; from the islands in the Pacific Ocean. Black-headed shrike, *lanius melanocephalus*; from the Sandwich islands. Northern shrike, *lanius septentrionalis*; from North America. Black-capped shrike, *lanius pileatus*; from Cayenne. Short-tailed shrike, *lanius brachyurus*; from Hungary. Ferruginous-bellied shrike, *lanius ferrugineus*; from the Cape of Good Hope. Tabuan shrike, *lanius tabuensis*; from the island of Tongataboo. White-shouldered shrike, *lanius varius*; from Brazil. Panayan shrike, *lanius Panayensis*. Red shrike, *lanius ruber*; from Surinam. Orange shrike, *lanius auran-tius*; from Cayenne. Nootka shrike, *lanius Natka*. Boulboul shrike, *lanius Boulboul*; from India. Dusky shrike, *lanius obscurus*.

BIRDS of the ORDER of PICÆ.

THIS order connects the rapacious birds with the gallinacious or poultry tribes. It comprehends all the various genera, from the raven down to the humming bird; birds so different in their form and habits, that hardly any characters, however general, will apply to them all. They live upon fruits, grain, insects, and flesh. As an article of food, they are generally reckoned impure: their feathers are of little use for any of the purposes of human life. Though they are fond of the vicinity of man, they are the least profitable of all his servants; for they live upon the fruits of his industry, while their death makes no compensation for the mischiefs they have done. They are noisy, restless, and loquacious; some of them possess the faculty of imitating the human voice; and the instructing of them in the art of speaking constitutes frequently the amusement of the idle.

Though useless or hurtful to man, birds of this order are, by their remarkable ingenuity, and active habits, well fitted for society. "Could we," says

Goldsmith, "suppose a kind of morality among the feathered race, we should find that this class is by far the most industrious, the most faithful, the most constant, and the most connubial. The rapacious kinds drive out their young before they are fit to struggle with adversity; but the pie kind cherish their offspring to the last. The poultry class are faithless and promiscuous in their courtship; but these live in pairs, and their attachments are wholly confined to each other. The sparrow kind frequently overleap the bounds of nature, and make illicit varieties; but these never. They live in harmony with each other: every species is true to its kind, and transmits an unpolluted race to posterity."

Birds of this order generally live in society, for which their habits are so wonderfully adapted. Both male and female unite their labours in building their nests; and in general, both are employed alternately in the duty of incubation. When the young are produced, they are abundantly supplied, by the joint labours of both parents. They are peculiarly distinguished for establishing a kind of government for the general safety of the society. One bird watches for the whole flock, while it is feeding; and among the crows, there has been observed a sort of distributive justice, by which every individual is punished for his offences against the laws of the society.

As they in general live by pilfering from the property of man, the whole tribe is marked by a look of archness and cunning. They are able to elude, more successfully than other birds, all the efforts of man to destroy them; efforts, which, from their so frequently incurring his resentment, he is continually obliged to practise. In the jack daw, the habit of thieving seems to be natural; for the bird, even in its domestic state, when placed above the reach of necessity, carries off to its nest every toy or glittering substance which it can find. A whole family has been alarmed at the loss of

a ring; every servant has been accused; and all in the house, conscious of their own innocence, have been suspecting each other; when, to their surprise, the abstracted goods have been found in the nest of a tame magpie or jackdaw, which, though alone guilty, had alone escaped suspicion.

This order of birds is extremely numerous, comprehending twenty-three distinct genera. Of these, eleven have *ambulatory* feet; that is, have three distinct toes before and one behind; eight have *scansory* feet, or two toes before and two behind; and four have *gressory* feet, that is, two fore toes connected, but without a membrane. The distinguishing character of this order is, that the bill is knife-shaped, with a convex back; feet furnished with toes short and stout; body hard, stringy, and impure; food gathered from dung, dirt, and rubbish; the nest built on trees, and the whole order monogamous. Among these the parrot kind, being the most remarkable, claim the first rank in this order of birds.

THE PSITTACUS, OR PARROT.

OF all foreign birds, this genus is the best known in Europe. From its docility, and the beauty of its plumage, it has been imported in greater numbers than the other birds of distant regions. In those countries where it is indigenous, it is the most numerous of all the feathered tribes. The parrot is an intratropical bird, and is found from twenty-four to twenty-five degrees on either side of the equator. Although it lives in the temperate climes of Europe, yet it does not frequently breed there; and its spirits and longevity are diminished in a temperature so little suited to the warmth of its constitution. Parrots are so various in size, and in the shades and distributions of their colours, that it is utterly impossible for language to describe nature in all her gradations and varieties of them; whoever attempts it, must lay aside the pen, and take
up

up the pencil. It is remarkable, that of upwards of an hundred species of parrots that are known and described, there is not one common to the New and the Old World. Something like this is observable also in the case of quadrupeds: none of those belonging to the tropical regions in the one continent are to be found in the same latitudes of the other. No animal that is incapable of bearing the rigours of cold, is found to pass from the Old to the New World; because it is only in the regions of the north that these are found to approximate. Notwithstanding its attribute of flight, the parrot is incapable of traversing that vast space between Africa and the East Indies; and all the different tribes of this large class remain confined to their primitive stations on each hemisphere. So short and heavy are their flights, that they can hardly cross an arm of the sea seven or eight leagues broad; hence, almost every island in the West Indies is distinguished by a race of parrots peculiar to itself.

Man has always admired those animals that seemed to participate most largely of its own nature. The monkey, by its resemblance to his external form, and the parrot by imitating his voice, have excited his wonder, and been deemed a peculiar and privileged race, destined to fill up the intermediate space between him and the brute creation. Savages, who are in general so insensible to the grand spectacle of nature, have viewed these animals with astonishment and delight. They stop their canoes for hours together, to behold the gesticulations of the monkey; and they take such pleasure in taming and educating parrots, that they are said to possess the secret of enriching and varying the hue of their plumage; an art to which the more civilized nations of Europe are still strangers. The parrots, to which the savages give artificial colours, are termed *tapiris*. This is said to be effected by means of the blood of a frog, which they drop into the small wounds made in young parrots by plucking their feathers:

thers : those which sprout again change their green or yellow tints, into orange, rose-colour, or variegated hues, according to the operation employed.

The Greeks at first knew only one species of parrot, which was imported from the east by one of the captains of Alexander's fleet. Aristotle, the father of naturalists, only speaks of it as a rare bird, of which he had heard by report. The beauty of parrots, and their faculty of speech, soon made them objects of high request among the luxurious Romans, whom the virtuous Cato justly reproaches for this puerile attachment. In his time they kept them in cages of silver and of ivory, and bought them at a price as high as that of a slave. Till the time of Nero, however, they knew no other species but those from India, when those who ministered to the pleasures of that extravagant and luxurious emperor found them in an island far up the river Nile, called Gaganda.

The Portuguese, who first doubled the Cape of Good Hope, found the whole coasts of Africa, and the islands of the Indian ocean, peopled with various tribes of parrots totally unknown in Europe, and in such vast numbers, that it was with difficulty they could be prevented from devouring the rice and maize. These, however, were far inferior to the numbers and variety that presented themselves to the first adventurers in the New World: some of the islands there, were called the Parrot isles, from the vast quantity of these birds which flocked upon them. They constituted the first article of commerce, between the inhabitants of the Old and New Continents. In these regions every forest swarms with them; and the rook is not better known in Europe than the parrot in the East and West Indies.

So great is their variety, that nothing seems more remarkable, than that only one species of them was known to the ancients, at a period when they boasted of being masters of the whole world. Of more than an hundred species now known, scarcely one naturally breeds

breeds in the countries that acknowledged the Roman power; a striking proof how ill founded the pretensions of that people were to universal dominion. The green paroquet with a red neck, is the first of this genus that was brought into Europe, and is now only known by the descriptions given of it by the ancients.

The great docility of this tribe, and the ease with which they are taught to imitate the human voice, may be an apology for those who spend so much of their time teaching their parrots to speak. The education of a parrot has often been compared to that of a child: Buffon remarks, that the education of a child, may often, with equal reason, be compared to that of a parrot. It appears from Pliny, that the tuition of these birds in Rome was a matter of serious concern. The preceptor kept the birch continually in his hand, and was often obliged to make smart applications of it, before he could secure the scholar's attention. Wonderful are the attainments said to be made by the parrots, who have thus received a regular education; and such as many of our orators might be proud to imitate. Their proficiency is, in general, in proportion to the idleness of their masters. Those in France are eloquent; but far inferior, in copiousness and fluency, to the Brazilian parrots, whose instruction is often the chief business of a lady's life. An old author gravely mentions one that was kept by a cardinal, which most devoutly repeated the Apostle's creed. Buffon speaks of another, who acted as chaplain to the sailors on-board of a vessel, regularly reciting prayers every day. Thus it seems that almost all animals may be improved by associating with man; but they cannot be instructed to improve each other; for they never can communicate the ideas and knowledge which they have acquired. Even birds whose shape and proportions are so different from those of quadrupeds, are susceptible of the same degrees of education. The *agamis* can be trained to perform nearly all the actions of the dogs; a canary,

canary, properly bred, shews its attachment by careffes that are equally animated, and more innocent and more sincere than those of the cat. There are many authentic records of the wonderful effects of education on the rapacious birds, which seem the most savage and the most averse to bend to instruction; the following instance of which is no less extraordinary than entertaining. "In 1763," says M. Fontaine, "a buzzard was brought to me that had been taken in a snare: it was at first extremely savage and cruel. I undertook to tame it, and I succeeded by leaving it to fast, and constraining it to come and eat out of my hand. By pursuing this plan, I brought it to be very familiar; and, after having shut it up about six weeks, I began to allow it a liberty, taking the precaution, however, to tie both pinions of its wings. In this condition it walked out into my garden, and returned when I called it to feed. After some time, when I judged that I could trust to its fidelity, I removed the ligatures, and fastened a small bell, an inch and a half in diameter, above its talon, and also attached on the breast a bit of copper having my name engraved. I then gave it entire liberty, which it soon abused; for it took wing, and flew as far as the forest of Belesme. I gave it up for lost; but four hours afterwards I saw it rush into my hall, which was open, pursued by five other buzzards, which had constrained it to seek its asylum. . . . After this adventure it ever preserved its fidelity to me, coming every night to sleep on my window; it grew so familiar with me, as to seem to take singular pleasure in my company. It attended constantly at dinner, sat on a corner of the table, and very often careffed me with its head and bill, emitting a weak sharp cry, which however it sometimes softened. It is true that I alone had the privilege. It one day followed me, when I was on horseback, about two leagues, sailing above my head. . . . It had an aversion both to dogs and cats, nor was it in the least afraid of them; it had

VOL. IV. No. 55. C c often

often tough battles with them, and always came off victorious. I had four very strong cats, which I collected in my garden beside my buzzard; I threw to them a bit of raw flesh, the nimblest cat seized it, the rest pursued; but the bird darted upon her body, bit her ears with his bill, and squeezed her sides with his talons, with such force, that the cat was obliged to relinquish her prize. Often another cat snatched it the instant it dropt, but she suffered the same treatment till the buzzard got entire possession of the plunder. He was so dexterous in his defence, that, when he perceived himself assailed at once by the four cats, he took wing, and uttered a cry of exultation. At last, the cats, chagrined at their repeated disappointment, would no longer contend.

“ This buzzard had a singular antipathy; he would not suffer a red cap on the head of any peasant, and so alert he was in whipping it off, that they found their head bare without knowing what was become of their cap. He also snatched wigs without doing any injury, and he carried these caps and wigs to the tallest tree in a neighbouring park, which was the ordinary deposit of his booty. He would suffer no other bird of prey to enter his domain; he attacked them very boldly, and put them to flight. He did no mischief in my court-yard, and the poultry, which at first dreaded him, grew insensibly reconciled to him. The chickens and ducklings received not the least harsh usage, and yet he bathed among the latter. But what is singular, he was not gentle to my neighbours' poultry; and I was often obliged to publish that I would pay for the damages which he might occasion. However, he was often fired at, and he received fifteen musket-shots, without suffering any fracture. But once early in the morning, hovering over the skirts of a forest, he dared to attack a fox; and the keeper, seeing him on the shoulder of the fox, fired two shots at him; the fox was killed, and the buzzard had his wing broken; yet

notwith-

notwithstanding this fracture he escaped from the keeper, and was lost seven days. This man having discovered, from the noise of the bell, that he was my bird, came next morning to inform me; I sent to make a search near the spot; but the bird could not be found, nor did it return till seven days after. I had been used to call him every evening with a whistle, which he answered not for six days; but, on the seventh, I heard a feeble cry at a distance, which I judged to be that of my buzzard: I repeated the whistle a second time, and I heard the same cry. I went to the part whence the sound came, and, at last, found my poor buzzard with his wing broken, which had travelled more than half a league on foot to regain his asylum, from which he was then distant about 120 paces. Though he was extremely reduced, he gave me many caresses. It took near six weeks till he was recruited, and his wounds healed; after which he began to fly as before, and follow his old habits for about a year: he then disappeared for ever. I am convinced that he was killed by accident; and that he would not have forsaken me from choice." Letter of M. Fontaine, dated January 28, 1778.

But that education which seems to unfold the faculties, and meliorate the dispositions, of quadrupeds or birds, renders them odious to the rest of their species. When a buzzard, for instance, a magpie, or a jay, escapes to the woods, its savage kindred flock around it to gaze at the novelty. Their wonder is soon converted into rage; and they furiously attack and drive off the intruder: nor is it admitted into their society till it relinquishes its artificial habits, and adopts the manners of the tribe.

Parrots, in their wild state, feed almost on every kind of fruit and grain. Their flesh, it is said, always contracts the peculiar taste and flavour of the food they eat. At the season when the guava is ripe, they are fat and tender; and some of the small tribes of the

paroquet are then sought after by the savages as delicate food. If they feed upon the seed of the acajou, their flesh acquires the flavour of garlic; when fed upon the seed of the spicy trees, their flesh tastes of cloves and cinnamon. The seed of the cotton tree intoxicates them, as well as wine and the smoke of tobacco, which, in taming, are often prescribed to them, to soften their fierceness and render them more talkative. Their appetite for flesh is unnatural, and, when gratified, never fails to bring on diseases. Of all food, they are fondest of the carthamus or bastard saffron; which, though of a strongly purgative quality to man, agrees perfectly with their constitutions, and will fatten the Guinea parrot very quickly.

Birds of this kind are subject to disorders unknown to the rest of the feathered tribes; many of them die of the epilepsy and the gout. They are, however, remarkable for longevity; and there are some well-attested instances of their having lived from fifty to sixty years. From twenty to thirty years may be considered as the common period which these birds live, when well kept. After that space, the bill becomes generally so much hooked, that they are deprived of the power of taking food. They commonly breed in the hollow parts of old trees which have begun to rot: sometimes availing themselves of the labours of the woodpecker, they seize upon the hole which it has industriously scooped out. The larger kinds lay only two eggs, but they bring forth twice in the year. The smaller kinds, which from their weakness are more exposed to devastation, are probably more prolific; for nature constantly replenishes those species which are most easily destroyed, by conferring on them a superior degree of fecundity.

As it is only when the parrots are taken young that they can be successfully tamed, the savages commonly take them while in the nest. They sometimes, however, catch them when full grown, for food, and for their feathers, which they convert into valuable articles
of

of drefs. For this purpofe they have various contrivances. They fometimes mark the trees on which they perch, and during night bring fulphureous fubftances, which they burn around them : by the fumes of thefe, the creatures are fuffocated, and fall to the ground. In fome places they ftun them with arrows wrapped at the point with cotton ; in others, they cut down the tree in which the neft is built. In New Spain, where the feathers conftitute an article of regular commerce among the natives, they take poffeffion of a number of trees where the parrots breed, which they tranfmit as an inheritance from father to fon ; and thefe trees form often the principal parts of their immoveable fubftance. In order to form fome kind of arrangement of the birds of this numerous tribe, naturalifts have feparated them into two great divifions ; thofe of the Old, and thofe of the New, Continent. The former have been fubdivided into the *cockatoos*, the *parrots*, the *lories*, and the *paroquets* ; and the latter into the *aras* or *maccaws*, the *amazons*, the *criks*, the *popinjays*, and the *paroquets*. Thefe claffes differ chiefly in point of fize, growing fmall in the order they are mentioned.

PARROTS of the OLD CONTINENT.

THE WHITE-CRESTED COCKATOO.

THIS firft fpecies is nearly as large as a hen. Its plumage is entirely white, except a yellow tinge on the under fide of the wings, and of the lateral quills of the tail ; the bill and feet are black. Its noble creft is very remarkable, confifting of ten or twelve feathers, not of the foft downy kind, but of the nature of quills, tall and broad webbed ; they are inferted in two parallel lines running back from the face, and form a double fan. Specific character of the *psittacus cristatus* : " It is white, its creft pliant and yellow." Synonymes.---Le kakatëos à huppe blanche, Buff.
Psittacus

Psittacus cristatus, Linn. Gmel. and Borowsk. *Cacatua*, Briss. *Kakatocha tota alba*, Klein. *Psittacus albus cristatus*, Ray and Will.

THE YELLOW-CRESTED COCKATOO.

OF this species, there are two branches, differing in size. In both the plumage is white, with a yellow cast under the wings and the tail, and spots of the same colour round the eyes; the crest is yellow citron, consisting of long soft ragged feathers, which the bird elevates and projects; the bill and feet are black. It was a cockatoo of this species, and probably the first ever seen in Italy, that Aldrovandus describes; and he admires its elegance and beauty. It is as intelligent, gentle, and docile, as the preceding. It expresses joy by shaking its head briskly several times upwards and downwards, making a slight cracking with its bill, and displaying its elegant crest. It returns the caresses; touches the face with its tongue, and seems to lick it; the kisses are soft and gentle. When the one hand is laid flat under its body, and the other rests on its back, or only touches its bill, it presses firmly, claps its wings, and with its bill half open it blows and pants, and seems to feel the most intoxicating delight. It repeats this as often as one chooses. It is also very fond of being scratched; holds its head, and raises its wing to be stroked: it often whets its bill, by gnawing and breaking bits of wood. It cannot bear the confinement of the cage, but it never roves out of the master's sight. It answers his call, and retires when he commands; in which case it discovers anxiety, often looking back for the sign of invitation. It is exceedingly neat; all its motions are graceful, delicate, and pretty. It feeds on fruits, pulse, all the farinaceous grains, on pastry, eggs, milk, and whatever is sweet. Specific character of the *psittacus sulphureus*: "It is white, its crest pliant and drawn to a point; and this, with a spot below the eyes, is brimstone colour."



The yellow crested Cockatoo.

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Painted by



lour." Synonymes.---Le kakatoës à huppe jaune, *Buff.* *Psittacus sulphureus*, *Gmel.* *Cacatua luteo-cristata*, *Briss.* The crested parrot or cockatoo, *Albin.* The lesser white cockatoo, *Edw.* and *Lath.*

THE RED-CRESTED COCKATOO.

THIS is one of the largest of the genus, being near a foot and a half long; the upper part of its crest, which reclines backwards, consists of white feathers, and covers a bundle of red ones. Specific character of the *psittacus moluccensis*: "It is white, inclining to a dilute rose colour; its crest is red above; the lateral feathers of its tail below, from the base to the middle, brimstone coloured." Synonymes.---Le kakatoës à huppe rouge, *Buff.* *Psittacus moluccensis*, *Gmel.* *Psittacus rosaceus*, *Lath. Ind.* *Cacatua rubro cristata*, *Briss.* and *Gerini.* The greater cockatoo, *Edw.* The great red-crested cockatoo, *Lath.*

THE LITTLE FLESH-BILLED COCKATOO.

THE plumage is entirely white, except some tints of pale red on the temples, and on the feathers of the upper part of the crest, which red cast is deeper on the coverts of the lower surface of the tail. There is a light yellow at the origin of the scapular feathers and of those of the crest, and on the inside of the quills of the wing and of most of those of the tail; the feet are blackish; the bill reddish brown, which is peculiar to this species, the bills of the other cockatoos being all black. It is the least of the genus; Brissot makes it of the size of the Guinea parrot, but it is much smaller. It has a crest, which lies flat, and is erected at pleasure. Specific character of the *psittacus erythro-leucus*: "It is cinereous; the quills of its wings are white crimson." Synonymes.---Le petit kakatoës à bec couleur de chair, *Buff.* *Psittacus erythroleucus*, *Linn. Gmel. Ray,* and *Will.* The red and white parrot, *Lath.*

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THE BLACK COCKATOO.

ITS plumage is a fine bluish black, which is deeper on the back and the wings than under the body; the crest is brown or blackish, and the bird has, like the other cockatoos, the power of erecting it high, and of reclining it almost close on the head; the cheeks below the eye are covered by a red, naked, wrinkled, skin, which covers the inferior mandible of the bill, whose colour, as well as that of the feet, is blackish brown; the eye is fine black. The bird may be reckoned the negro of the cockatoos, which are generally white; the tail is long, and consists of tapered feathers. Specific character of the *psittacus aterrimus*: "It is black, its crest large and lighter coloured, its cheeks red and naked."

THE CINEREOUS PARROT.

THIS species is now the most commonly brought into Europe, and generally preferred, as well on account of the mildness of its disposition as of its sagacity and docility, in which it at least equals the green parrot, without the disagreeable cries. All the body is of a fine pearl and slaty gray, which is deeper on the upper surface, lighter on the lower, and inclined to white on the belly. The tail, which is vermilion, terminates and heightens this plumage, which is glossed and powdered with a snowy colour, that gives it constantly a fresh appearance. The eye is placed in a white, naked, mealy skin, that covers the cheek; the bill is black; the feet gray; and the iris gold colour. The total length of the bird is a foot.

Most of these parrots are imported from the coast of Guinea, and come from the interior parts of Africa: they are also found at Congo, and on the coast of Angola. They are very easily taught to speak, and seem fonder of imitating the voice of children, who are also the most successful in training them. It has indeed
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been remarked by the older writers, that the birds most susceptible of imitating the human voice are eager to listen to children, whose articulation is imperfect and unequal, and therefore more correspondent to their own. But the cinereous parrot copies also the deep tones of the adult; though the effort is laborious, and the words are less distinct. One of these Guinea parrots was so completely drilled by an old sailor, that it acquired exactly his hoarse voice and cough; and though it was afterwards given to a young person, and was in no other company, it never forgot the lessons of its first master, and it was diverting to observe its transitions from a soft gracious note to its former hoarseness and coarse sea tones.

But not only has this bird a facility, it has also an eagerness, in imitating the human voice. It listens with attention, and strives to repeat; it dwells constantly on some syllables which it has heard, and seeks to surpass every voice by the loudness of its own. We are often surprised at its repeating words or sounds, which we never taught it, and which we should not suppose it to have noticed; witness that parrot of Henry VIII. which, as Aldrovandus relates, having fallen into the Thames, called to the boatmen for assistance, as it had heard the passengers call from the beach. It seems to set itself tasks, and tries every day to retain its lesson. This engages its attention even in sleep, and, according to Marcgrave, it prattles in its dreams. They are most capable of improvement when young; then they shew more sagacity, more docility: and their memory, if early cultivated, becomes sometimes astonishing. Rhodiginus mentions a parrot which a cardinal purchased for one hundred crowns, because it *recited correctly the Apostles' Creed*. But, when it grows older, it becomes stubborn, and will hardly be taught. Olina recommends the evening, after their meal, as the proper time to instruct them; for, their wants being satisfied, they are most docile and attentive.

The following remarks are by Madame Nadault, sister to M. Buffon, on a parrot in her possession. "He often spoke to his paw, and answered by holding up the paw. Though he liked to hear the voice of children, he seemed to have an antipathy to them; he pursued and bit them till he drew blood. He had also his objects of attachment, and, though his choice was not very nice, it was constant. He was excessively fond of the cook-maid; followed her every where, sought for her, and seldom missed finding her. If she had been some time out of his sight, the bird climbed with his bill and claws to her shoulders, lavished his caresses, and would, on no account, leave her. His fondness had all the marks of close and warm friendship. The girl happened to have a very sore finger, which was tedious in healing, and so painful as to make her scream. While she uttered her moans, the parrot never left her chamber. The first thing he did every day was to pay her a visit; and this tender condolence lasted the whole time of the cure, and he again returned to his former calm settled attachment. Yet this strong predilection for the girl seems to have been more directed to her office in the kitchen than her person; for, when another cook-maid succeeded to her, the parrot shewed the same degree of fondness the very first day."

But parrots of this kind not only imitate discourse; they also mimic gestures and actions. Scaliger saw one that performed the dance of the Savoyards, at the same time repeating their song. The one already mentioned liked to hear a person sing, and, when he saw him dance, he also tried to caper, but with the worst grace imaginable, holding in his toes, and tumbling back clumsily. He was then the most cheerful; but he had also an extravagant joy, and an incessant prattling, when in the state of intoxication: for all parrots love wine, particularly the Spanish and the muscadine. Even in the time of Pliny it was remarked
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that the fumes of that liquor gave the parrots a flow of spirits. He crept near the fire in winter, and his greatest pleasure, in that season, was to get on the chimney; and when warmed he gave many signs of his comfortable feelings. He had equal pleasure in the summer showers; he continued whole hours exposed, and spread his wings the better to receive the rain, and did not seek for cover till he was wet to the skin. After he had returned to his roost, he dressed all the feathers one after another through his bill. If the weather was dry, he liked to bathe in a cistern of water, and entered into it repeatedly, though always very careful not to wet his head. But he was as averse to plunge in winter; and, if then shewn a vessel full of water, he would run off, and even scream.

Sometimes he was observed to yawn, and this was almost always the symptom of weariness. He whistled with more force and clearness than a man; but, though he expressed many tones, he could never be taught to copy an air. He imitated perfectly the cries of wild and domestic animals, particularly the crow, which he mimicked so well, that he might have been taken for one. He seldom prattled in a room with company; but, if alone in the adjacent room, he was noisy in proportion to the loudness of the conversation which he overheard; he seemed prompted to repeat precipitately all that he had learnt, and was never so animated or so clamorous. In the evening he retired of his own accord to his cage, which he shunned during the day: there with one foot concealed in his plumage, or hooked to the bars of the cage, and his head beneath his wings, he slept until he perceived the dawn of the morning; but he often wakened to the blaze of candles. Then he stepped down to the bottom of the cage, and sharpened his claws, using the same motion with the scratching of a hen. Sometimes he whistled or prattled in the night when exposed to light; but in the dark he was silent and tranquil.

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That sort of society which the parrot forms with man, is, by means of language, more intimate and pleasing than what the monkey can claim from its antic imitation of our gestures and actions. If the useful and amiable qualities of the dog, the horse, or the elephant, command our attention and esteem, the singular talents of the prattling bird sometimes engage more powerfully our curiosity. It diverts and amuses; in solitude it is company; it takes part in conversation, it laughs, it breathes tender expressions, or mimics grave discourse; and its words uttered indiscriminately please by their incongruity, and sometimes excite surprise by their aptness. Willughby speaks from Clusius of a parrot, which, when a person said to it, *Laugh, Poll, laugh*, laughed accordingly, and the instant after screamed out, *What a fool to make me laugh!* We have seen another which grew old with its master, and shared with him the infirmities of age. Being accustomed to hear scarce any thing but the words *I am sick*; when a person asked it, *How d'ye, Poll, how d'ye?* *I am sick*, it replied, with a doleful tone, stretching itself over the fire, *I am sick*. And in the annals of Constantine Manasses, we have the story of the young Prince Leo, son of the Emperor Basil, condemned to death by his implacable father, whom the cries of the persons around him could not move, till the accents of the bird, which had learnt to deplore the fate of the prince, at last stung his barbarous heart. This play of language without meaning is uncommonly whimsical, and, though not more empty than much other talk, it is always more amusing. The parrot seems also to receive a tincture of our inclinations and manners; it loves, or it hates; it has particular attachments, predilections, and caprices; it is the object of its own admiration and applause; it becomes joyous or sad; it is melted by caresses, and bills tenderly in return: in a house of mourning, it learns to moan, and, often accustomed to repeat the dear name of a

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mistress

mistress whose loss is bewailed, it awakens, in feeling hearts, the memory of past joys.

The power of imitating exactly articulate discourse implies in the parrot a peculiar and more perfect structure of organ; and the accuracy of its memory, though independent of the understanding, manifests a closeness of attention and a strength of mechanical recollection that no bird possesses in so high a degree. Accordingly, all the naturalists have remarked the singular form of its bill, its tongue, and its head: its bill, round on the outside and hollow within, has, in some measure, the capacity of a mouth, and allows the tongue to play freely; and the sound, striking against the circular border of the lower mandible, is there modified as on a row of teeth, while the concavity of the upper mandible reflects it like the palate; and hence it does not utter a whistling, but a full, articulation. The tongue, which modulates all the sounds, is proportionally larger than in man, and would be more voluble, were it not harder than flesh, and invested with a strong horny membrane.

But this organization, though adjusted with skill, is still inferior to the structure contrived to give an easy and powerful motion to the upper mandible, and, at the same time, not to hinder its opening. The muscles are not fixed to the root, where they would have exerted no force; nor to the sides, where they would have closed the aperture. Nature has adopted a different plan; at the bottom of the bill are fixed two bones, which, extending on both sides, and under the cheeks, form a continuation of it, similar in form to the *pterygoid* bones in man, except that their hinder extremity is not concreted into another bone, but loose. Thick layers of muscles, sent off from the back of the head, and inserted in these bones, move them and the bill. Aldrovandus observes, that, between the eye and the lower jaw, there is a space, which deserves better the name of cheek than in any other bird; it is also
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more protuberant, occasioned by the number of muscles that extend over it to the bill. The bill is very strong; the parrot easily cracks the nuts of the red fruits; it gnaws the wood, and even bends or wrenches the bars of its cage, if they be slender, or if it be tired of confinement. It uses its bill, oftener than its claws, in climbing and suspending itself; it also holds by the bill in descending, as if it were a third foot, which steadies its motion; it also serves to break its fall. It is a second organ of touch, and is equally useful with its toes, in scrambling and clenching.

The mobility of its upper mandible gives it a power which no other birds have, of chewing its food. In those, whether of the granivorous or carnivorous tribes, the bill is like a hand which throws the food into the gizzard, or an arm which spits or tears it. The parrot seizes the piece sideways, and gnaws deliberately. The lower mandible has little motion, but that from right to left is most perceptible; and this is often performed when the bird is not eating, which has made it be supposed to ruminate. In such cases it probably only whets the edge of this mandible, with which it cuts and bites its aliments. The parrot discovers hardly any choice in its food: it lives in its native country on almost every sort of fruit or grain. In the domestic state, it eats whatever is presented; but flesh, which it would rather prefer, is extremely hurtful to it, and occasions an unnatural longing, which prompts it to suck and gnaw its feathers, and pluck them one by one from every part that its bill can reach. This cinereous Guinea parrot is particularly subject to that disease; it tears the feathers from its body, and even from its beautiful tail, which never afterwards recovers the same bright red as at first. Sometimes after moulting this parrot is observed to become marbled with white and rose colour; occasioned either by some distemper, or by advanced age.

It is uncommon for parrots to propagate in our temperate

temperate climates; but they frequently lay addle eggs. There are some instances, however, of parrots being reared in France. M. de la Pigeoniere had a cock and hen in the town of Marmande in Agenois, which hatched regularly each spring for five or six years, and the young parrots lived, and were educated by the parents. Each hatch consisted of four eggs, three of which succeeded. The birds were shut in a room with nothing but a barrel open at top and filled with saw dust; sticks were fastened both on the outside and inside, that the male might scramble upwards and downwards, and sit beside the hen. In entering the room it was necessary to have boots; for the male, fired by jealousy, bit furiously whatever he perceived to approach its female. Specific character of the ash-coloured parrot, *psittacus erithacus*: "It is hoary, its temples white and naked, its tail crimson." Synonymes.---*Psittacus erithacus*, Linn. Gmel. and Kram. *Psittacus guineensis cinereus*, Briss. Ufchgraver pagey, Wirs. The ash-coloured parrot, *Albin*, Will. and Latb.

THE GREEN PARROT.

THIS bird is described as a native of China. But it is not found in many of the provinces of that vast empire; it is confined to the most southern, such as Quanton and Quangsi, which are near the tropic, the usual limit of the climate of parrots. This is probably one of those which travellers have fancied were the same both in China and in America. But that notion, which is contrary to the general order of nature, is overturned by comparing each species in detail. The present is unlike any of the parrots of the new world: it is as large as a middle-sized hen; the whole of its body is bright shining green; the great quills of the wing and the shoulders are blue; the flanks, and the under side of the top of the wing, brilliant red; the quills of the wings and tail are lined with brown.---

Edwards

Edwards says that it is very rare. It is found in the Moluccas, and in New Guinea. Specific character of the *psittacus sinensis*: "It is green; the lower coverts of its wings red; some of the greater ones, and the margin, blue; the tail brown below." Synonymes.---*Psittacus sinensis*, *Gmel.* and *Briss.* The green and red Chinese parrot, *Edw.* and *Lath.*

THE VARIEGATED PARROT.

THIS is of the size of a pigeon. The feathers round the neck, which it bristles when angry, are purple, edged with blue. The head is covered with feathers mixed with streaks of brown and white, as in the plumage of the hawk, and hence Edwards applies the epithet of *hawk-headed*. There is some blue on the great quills of the wing, and at the point of the lateral ones of the tail, of which the two middle ones are green, and so are the feathers on the upper side of the body.

The mailed parrot appears to be the same with the one just described; and we presume that the small number of these birds which have been brought from America to France were introduced from India into the new world, and that, if they are found in the interior parts of Guiana, they have been naturalized there like the canaries, finches, the Guinea-pig, and some other animals, that were carried thither by navigators from the old continent. That this species is not a native of America seems evinced, because no traveller mentions it. Besides, its voice, which is shrill and acute, is different from that of all the other parrots indigenous in that continent; and we may therefore conclude that it originated from a few individuals carried accidentally from India. Specific character of the *psittacus accipitrinus*: "It is green; its head gray; its neck and breast somewhat violet and variegated; the quills of its wings and tail tipped with blue. Synonymes.---*Psittacus accipitrinus*, *Linn.* *Gmel.* *Gerini*, and *Borowsk.* *Psittacus*

Psittacus varius indicus, *Briss.* *Psittacus elegans*, *Clusius*. The hawk-headed parrot, *Edw.* and *Lath.*

THE VAZA, OR BLACK PARROT.

VAZA is the name which this species bears in Madagascar, according to Flaccourt, who adds that it imitates the human voice. Rennefort also mentions it; and it is the same with what Francis Cauche calls *coures-meinte*; which, in the Madagascar dialect, signifies the black bird. Aldrovandus likewise takes notice of black parrots that inhabit Ethiopia. The Vaza is as large as the cinereous Guinea parrot, and is uniformly black over its whole plumage; the colour is not indeed intense, but inclined to brown, and tinged faintly with violet. It has a remarkably small bill; its tail is, on the contrary, of considerable length. Edwards, who saw it alive, says that is a very familiar and lovely bird. Specific character of the *psittacus niger*: "Its tail elongated and equal; its body bluish black; its bill and orbits whitish." Synonymes.---*Psittacus niger*, *Linn.* *Gmel.* *Klein*, and *Gerin.* *Psittacus Madagascarensis*, *Briss.* The black parrot of Madagascar, *Edw.* and *Lath.*

THE MASCARINE.

THIS parrot is so called, because, round its bill, there is a kind of black mask which envelopes the forehead, the throat, and the border of the face. Its bill is red; a gray hood covers the back of the head and neck; all the body is brown; the quills of the tail, which are brown two thirds of their length, are white at their origin. The total length of this parrot is thirteen inches. Specific character of the *psittacus mascarinus*: "It is cinereous, with the bridle black below; its orbits naked and reddish; its lateral tail-feathers whitish at their base." Synonymes.---*Psittacus mascarinus*, *Linn.* *Gmel.* and *Briss.*

THE BLOODY-BILLED PARROT.

THIS parrot is found in New Guinea. It is remarkably large. Its bill is blood-coloured, thicker and broader in proportion than that of any of the other parrots, and even than that of the American maccaws. The head and neck are of a brilliant green with gold reflections; the fore part of the body is yellow shaded with green; the tail is yellow below and green above; the back is sky blue; the wing appears tinged with a mixture of the same sky blue and green, according to its different positions; the coverts are black, edged and sprinkled with streaks of gold yellow; this parrot is fourteen inches long. Specific character of the *psittacus macrorhynchos*: "It is green, inclining below to yellow; its wings mixed with sky blue and green; its coverts black." Synonymes.---Le paroquet à bec couleur de sang, *Buff.* *Psittacus macrorhynchos*, *Gmel.* The great-bellied parrot, *Lath.*

THE GREEN PARROT OF BOTANY-BAY.

THIS is one of the most beautiful of the parrots; it is near twelve inches in length, though its tail is rather short. The face and the upper side of the head next the bill, are blue; all the upper surface is meadow-green, mixed with blue and red on the great quills; all the under surface is olive-green: the tail is green above, mixed with red, blue, and yellow, on the webs of the feathers.---Several of these have been lately brought to London by our ships from Botany-Bay, or New South Wales.

THE GRAY-HEADED PARROT.

THIS bird has a short tail, which excludes it from the family of the Parrakeets; and, though only seven inches and a half long, it is thick and round shaped. Its head and face are of a glossy bluish gray; its stomach and all the under side of its body are of a full
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marigold.

marigold-yellow, sometimes mixed with aurora red; its breast and all its upper surface green; except the quills of the wings, which are only edged with that colour on a brown gray ground.

These parrots are frequent in Senegal; they fly in small flocks of five or six, and perch on the straggling trees in the burning sandy plains of that country, and utter a shrill disagreeable cry. They keep close together, so that a person may kill several at once; and it often happens that a single shot levels with the ground the whole of the little flock. Le Maire affirms that they never speak; but perhaps they have been neglected in their education. He observes that the parrots at Senegal are of two kinds; some small and entirely green, others larger, having the head gray, the belly yellow, the wings green, and the back mixed with gray and yellow; the latter never speak, but the smaller have a sweet clear voice, and prattle whatever they are taught. Specific character of the *psittacus Senegalus*: "It is green, below yellow; its head cinereous; its orbits black and naked." Synonymes.---*Psittacus Senegalus*, Linn. Gmel. and Briss. The Senegal parrot, Lath.

THE LORIS.

THIS name has been applied in the East Indies to a family of parrots whose cry resembles the sound of the word *lori*. They are hardly distinguished from the rest of the genus, except by their plumage, which is chiefly red, and of various intensity. Their bill is also smaller, not so much hooked, but sharper than that of the other parrots. Their aspect is lively, their voice shrill, and their motions quick. They are, according to Edwards, the most nimble of all the parrots, and the only ones that can leap to the height of a foot. These well-ascertained facts confute the assertion of a certain traveller, that they brood in silent melancholy.

They are taught with great ease to whistle and articu-

culate words ; they soon grow tame, and, what is uncommon in all animals, they retain their cheerfulness in captivity. But they are in general very delicate, and difficult to transport ; and, in our temperate climates, they are short lived. Even in their native regions, they are subject to epileptic fits, like the macaws and other parrots ; yet it is probable that this disorder attacks only the domesticated birds.

“ Ornithologists have improperly,” says Sonnerat, “ discriminated the Loris by the epithets of the *Philippine*, the *East Indian*, the *Chinese*, &c. These birds inhabit only the Moluccas and New Guinea, and those found in other parts have been carried thither.” But these nomenclators are guilty of a greater impropriety in reckoning some species of Loris as natives of America, since none exists there ; and, if travellers have seen a few individuals, they must have been introduced from the Asiatic islands. Sonnerat adds too, that he constantly found the loris in one island to be of a different species from those in another, though at a short distance only. A similar observation has been made in regard to the islands of the West Indies.

THE NOIRA - LORI.

THIS bird is found at Ternate, at Ceram, and at Java, where it is called *Noria*, a name which the Dutch have adopted. It is held in such high estimation in India, that ten reals are readily offered for one Noira. In the account of the first voyage from Holland to Java, it is said that several of these beautiful birds, which were tried to be brought home, all died on the passage. In the second voyage, however, one was carried to Amsterdam ; and, since that time, they have been more frequent.

The noira shews strong attachment, and even affection, to its master ; it caresses him with its bill, and strokes his hair with surprising gentleness and tameness. At the same time it cannot bear strangers, and bites them

them with a sort of rancour. The natives of Java breed many of these birds. In general the custom of keeping tame parrots seems to have been very ancient in India, since *Ælian* mentions it. *Briffon* thus describes his *lorius moluccensis*: "It is scarlet; the spot on the upper part of its back and the upper coverts of the wings, yellow; the quills of the wings green externally and above, below pale rose-colour, within saffron tipped with black; the lateral quills of the tail above, crimson on their first half, and green on the other; the two outermost mixed externally on their last half with deep violet." Synonymes.---*Pfittacus garrulus*, three varieties, *Gmel.* *Lorius moluccensis*, *Briff.* and *Gerini*.

VARIETIES OF THE NOIRA.

TO the Noira we ought perhaps to refer the Java parrot mentioned by *Aldrovandus*, and which the inhabitants of that island term *nor*, which means brilliant. The whole of the body is of a deep red; the wings and the tail are of a deep green; there is a yellow spot on the back, and a small border of the same colour on the shoulder. Of the feathers of the wings, which when closed appear entirely green, the coverts only, and the small quills, are yellow, and the large ones are brown. This is the second variety of *Linnaeus'* *pfittacus garrulus*.

The Lori described by *Briffon* under the name of the *Ceram Lori*, and to which he applies what we have ascribed to the Noira, is only a variety, and in no respect different, except that its legs are green, while those of the former are red, like the rest of the body. Specific character: "It is red; its orbits cinereous; its cheeks and wings green; its tail-quills blue on their posterior half." Synonymes.---*Pfittacus garrulus*, *Linn.* *Gmel.* and *Borowsk.* *Lorius ceramensis*, *Briff.* *Pfittacus rufus*, *femoribus alisque viridibus*, *Fris.* and *Klein.* The purple parrot, *Charlton.* The scarlet parrakeet

parrakeeto with green and black wings, *Will.* The ceram lory, *Lath.*

THE COLLARED LORY.

ALL the body, including the tail, is of a deep blood colour; the wing is green, the top of the head is black, terminated with violet on the nape; the legs and the fold of the wing are of a fine blue; the lower part of the neck is furnished with a yellow collar. The bird under the name of the *East Indian Lory*, and which Brisson describes by the same appellation, appears to be the female of this; for the only difference is that it wants the yellow collar, and that the blue spot on the top of its wing is not so broad; it is also somewhat smaller. This lory is like all the rest of the kind, very gentle and familiar; but it is also very delicate and difficult to breed. None more easily learns to speak, and even with distinctness. "I have seen one," says Aublet, "which repeated every thing it heard the first time." It had come from India to the Isle of France, and had been brought over by the Count d'Estaing. Though this capacity is very astonishing, there is no reason to doubt of it. This bird is valued very high; Albin says that he saw one sold for twenty guineas. All voyagers speak with admiration of the facility with which the parrots of the Moluccas can repeat what they hear. Their colours are variegated, and form an agreeable mixture; they scream much, and very loud. Specific character of the *psittacus-domicella*: "It is red; its cap violet: its wings green; its shoulders and knees blue; its orbits brown." Synonymes.---*Psittacus-domicella*, *Linn.* *Gmel.* and *Borowsk.* *Lorius orientalis indicus*, *Briss.* The second black-capped lory, *Edw.* The purple-capped lory, *Lath.*

THE TRICOLOR LORY.

THE fine red, the azure, and the green, which are disposed

disposed in large spots on the plumage of this lory, have induced ornithologists to give it the epithet of *tricolor*. The fore part and the sides of the neck, the flanks, the lower part of the back, the rump and half the tail, are red. The under side of the body, the legs, and the top of the back, are blue; the wing is green, and the point of the tail, blue; the crown of the head is covered by a black cap. The bird is near ten inches long. Few are so beautiful, both on account of the brilliancy of the colours, and their elegant contrast. Edwards saw it alive, and terms it the *Little Lory*; it whistled pleasantly, he says, and pronounced several words distinctly; and, leaping briskly on its roost or on the finger, it called with a soft clear voice, *Lory, lory*. It played with the hand, and ran after persons, hopping like a sparrow. This charming bird lived but a few months in England. Specific character of the *psittacus-lory*: "It is purple; its cap violet; its wings green; its breast, its cheeks, and its tail, blue; its orbits somewhat carnation." Synonymes.---*Psittacus-lory*, Linn. Gmel. and *Borowsk*. *Lorius philippensis*, Briss. The first black-capped lory, *Edw.* and *Lath.*

THE CRIMSON LORY.

THIS lory is near eleven inches long. We term it *crimson*, because the red of its plumage, the face except, is not so brilliant as in the others, and has a dull brown cast on the wing. The blue of the top of the neck and of the stomach is weak, and inclined to violet; but, on the fold of the wing, it is bright and azure, and, at the edge of the great quills, it is lost in their blackish ground; the tail is of a smoky red below, and of the same tile-red above, as the back. This is not the only species seen at Amboyna, and from Gemelli Carreri the following also appears to be found there. Specific character of the *psittacus puniceus*: "It is deep scarlet, below white; the lesser and inferior coverts of its wing, and the inner and under side of its wing-quills

quills are blackish brown. Synonymes.---*Psittacus puniceus*, *Gmel.* *Lorius amboinensis*, *Briff.*

THE RED LORY.

THIS bird is entirely red, except the tip of the wing, which is blackish, and two blue spots on the back, and one of the same colour on the under coverts of the tail. It is ten inches long, and appears to be a new species. It is improperly termed the *Chinese Lory* by some authors; for voyagers never mention the lories as found in China, and one of our best observers, M. Sonnerat, assures us, on the contrary, that they are all inhabitants of the Moluccas and of New Guinea. In fact, the *Gilolo Lory* of this author seems to exactly the same with the present. Specific character of the *psittacus ruber*: "It is red; the space about the eyes and the wing-quills black; the spot on the wings and the lower coverts of the tail sky-blue; the tail tipped with bay." Synonymes.---*Psittacus ruber*, *Gmel.* The molucca lory, *Lath.*

THE RED AND VIOLET LORY.

THIS species has hitherto been found only at Gueby. All the body is of a shining red, regularly scaled with violet brown from the back of the head, passing by the sides of the neck, as far as the belly; the wing is broken by red and black, in such a manner that this last colour terminates all the points of the quills, and marks a part of their webs; the small quills and their coverts nearest the body are dun-violet; the tail is copper red. The total length of the bird, eight inches. Specific character of the *psittacus guebiensis*: "It is brilliant red; its wing-quills striped transversely with black; its tail brown-red." Synonymes.---*Psittacus guebiensis*, *Gmel.* The gueby lory, *Lath.*

THE GREAT LORY.

THIS is the largest of all the loris, being thirteen inches

inches long. The head and neck are of a fine red; the lower part of the neck, where it joins the back, is violet blue; the breast is richly clouded with red, blue, violet, and green, and the mixture of green and fine red is continued under the belly; the great quills, and the edge of the wing, from the shoulder, are sky blue; the rest of the upper surface is dull red. Half of the tail is red, the tip yellow.

It appears that Vosmaer describes the same species by the name of *Ceylon lory*. It was probably carried from a greater distance to that island, and thence brought into Holland; but it lived there only a few months. Synonymes,---*Psittacus grandis*, *Gmel.* The grand lory, *Lath.*

THE RED PARRAKEET LORY.

THE plumage of this bird is almost wholly red, except some of the coverts and the tips of the quills of the wing and of the tail, which are partly green and partly blue. The total length is eight inches and a half. Edwards says that it is very rare, and that a traveller brought it from Borneo, and gave it to Sir Hans Sloane. Specific character of the *psittacus borneus*, as given by Mr. Latham: "It is red; the quills of its wings and tail green; a blue spot on its wings, its orbits brown." Synonymes,---*Psittacus borneus*, *Linn.* and *Gmel.* *Psittaca coccinea bonarum fortunarum insulæ*, *Briss.* The long-tailed scarlet lory, *Edw.* and *Lath.*

The VIOLET and RED PARRAKEET LORY.

THE prevailing colour is red, mixed with violet blue. The bird is ten inches long, and its tail occupies near one third of that space. The tail is entirely of a full blue, which also covers the flanks, the stomach, the top of the back, and of the head; the great quills of the wing are yellow; all the rest of the plumage is of a fine red, edged with black, which is disposed in festoons on the wings. Specific character of the *psitta-*

cus indicus: "It is scarlet, variegated with brown and violet; the upper parts of its head and neck, its breast, and a band behind the eyes, violet; the tips of the greater tail-quills dilute brown, those of the lesser and the coverts, brown violet." Synonymes.---*Psittacus indicus*, *Gmel.* *Psittacus coccineus*, *Lath. Ind.* *Psittacus indica coccinea*, *Briss.* The Indian lory. *Lath. Syn.*

THE TRICOLOR PARRAKEET LORY.

RED, green, and turkey blue, are disposed in large marks over all its plumage; red covers the neck, and all the upper side of the body; the wing is deep green; the back and tail are of a full velvet blue. The tail is seven inches long; and the whole bird is fifteen inches and a half long, and as large as a turtle-dove. The tail in these three last species, though longer than common in the Loris and Parrakeets properly so called, is not tapered as in the long-tailed Parrakeets, but consists of equal quills, with a square termination. Specific character of the *psittacus amboinensis*: "It is scarlet; its back blue; its wings with a green spot." Synonymes.---*Psittacus amboinensis*, *Linn.* and *Gmel.* *Psittaca amboinensis coccinea*, *Briss.* The Amboyna red-parrot, *Lath.*

PARRAKEETS of the OLD CONTINENT, WITH LONG TAILS.

THE GREAT COLLARED PARRAKEET.

PLINY and Solinus have both described the green collared parrakeet, which was the only one known in their time, and which came from India. Apuleius delineates it with that elegance which it deserves, and says that its plumage is of a pure brilliant green. The only interruption of this colour is, according to Pliny, a half collar of bright red on the top of the neck. Aldrovandus, who has collected all the particulars, leaves no room to doubt but that the *long-tailed and collared*

Parrot of the ancients is the same with the red collared Great Parrakeet of this article. It is equally beautiful with the richest of the tribe: its plumage is of a lively light green on the head, and deeper on the wings and the back; the rosy half-collar embracing the back of the neck, joints, on the sides, to the black bar that covers the throat; the breast is of a vermillion red, and there is a purple spot on the crown of the head: the tail is beautiful, and longer than the body; its upper surface mixed with green and beryl, its under surface of a delicate yellow. The bird is found, not only on the south of the continent of Asia, but also in the adjacent islands, and at Ceylon; for this is Taprobana, from which Alexander's fleet brought the first parrot into Greece. Specific character of the *psittacus Alexandri*: "It is green; its collar and breast red; its throat black." Synonymes.---*La grande perruche à collier d'un rouge vif, Buff.* *Psittacus-Alexandri, Linn. Gmel. Scop. and Ber.* *Psittacus torquatus macrourus, Ray.* *Perrocello, Olin.* The ring parrakeet, *Edw. and Will.* The Alexandrine parrakeet, *Lath.*

THE DOUBLE COLLARED PARRAKEET.

TWO small rings, the one rose-coloured, and the other blue, entirely encircle the neck; all its plumage is green, which is deeper on the back, has a yellow cast under the body, and, in many parts, there is a dusky streak on the middle of each feather; below the tail, yellowish fringe edges the brown-gray, which is impressed on each quill. The bird is as large as a dove; and, as it is found in the island of Bourbon, it probably inhabits the corresponding continent, either of Africa or India. Synonymes.---*Psittacus-Alexandri, second variety, Gmel.* The double ringed parrakeet, *Lath.*

THE RED-HEADED PARRAKEET.

THIS bird is eleven inches in length, and the tail

is longer than the body. The whole of the upper side is dull green, with a purple spot on the top of the wing; the face is purplish red, which, on the head, runs into blue, and is intercepted, on the nape of the neck, by a streak produced from the black that covers the throat; the under side of the body is a dull dirty yellow; the bill is red. Specific character of the *psittacus erythrocephalus*: "It is green; its head red, mixed with blue; its throat black, with a black and pale green collar." Synonymes.---*Psittacus erythrocephalus*, *Gmel.* *Psittaca ginginiana*, *Briss.* The blossom-headed parakeet, *Lath.*

THE BLUE-HEADED PARRAKEET.

IT is ten inches long; its bill is white, its head blue, its body green; the fore-side of its neck yellow, and the under surface of its belly and tail yellow mixed with green; the middle quills of the tail have a blue cast above; the legs are bluish. Specific character of the *psittacus cyanocephalus*: "It is green; its head and throat blue." Synonymes.---*Psittacus cyanocephalus*, *Linn. Gmel. Briss. and Gerini.* The blue-headed parrot, *Lath.*

THE LORY PARRAKEET.

WE adopt the name which Edwards has bestowed on this species, because it is of a beautiful red, like the loris; that colour, intersected by small brown waves, covers the throat, the fore-part of the neck, and the sides of the face, as far as the back of the head, which it surrounds. The crown of the head is purplish; the back, the upper surface of the neck, the wings, and the stomach, are emerald green; the sides of the neck, and the flanks, are irregularly spotted with orange yellow; the great quills of the wing are blackish, fringed at the end with yellow; the tail, which is green above, appears tinged below with red, and is yellow at the tip; the bill and feet are white-gray.



Paroquets with long Tails.

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Page 101



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gray. This parakeet is about the middle size, and is only seven inches and a half long. It is one of the handsomest, on account of the brilliancy and variety of its plumage. Specific character of the *psittacus ornatus*: "It is yellow-green; the back of its head, its throat, and its breast, red; its top, and its ears, blue, with cinereous orbits." Synonymes.---*Psittacus ornatus*, Linn. Gmel. and Bor. *Psittacus indica varia*, Briss.

THE YELLOW PARRAKEET.

ALL its plumage is yellow, except the belly and the ring of the eye, which are red, and the quills of the wing, with a part of those of the tail, which are blue: the former are nearly intersected near their middle by a yellowish bar. Albin tells us that it can quickly learn to speak, and, though he calls it the Angola Parrot, he says it comes from the East Indies. Specific character of the *psittacus solstitialis*: "It is yellow; the coverts of its wings green; its orbits red; its lateral tail-quills blue exteriorly." Synonymes.---*Psittacus solstitialis*, Linn. and Gmel. *Psittaca angolensis lutea*, Briss. *Psittacus croceus*, Klein. *Psittacus luteus*, cauda longa, Fris. The Angola yellow parrot, Alb. and Lath.

THE AZURE-HEADED PARRAKEET.

THIS parakeet is of the size of a pigeon; its head, face, and throat, are of a fine sky-blue; there is a little yellow on the wings; the tail is blue, equally tapered, and as long as the body; the rest of the plumage is green. It is brought from the East Indies, according to Edwards, who describes it. Synonymes.---*Psittacus-Alexandri*, var. 4, Gmel. *Psittaca cyanocephalos indica*, Briss. The blue-headed parakeet, Edw. and Lath.

THE MOUSE-PARRAKEET.

THIS species appears to be new, and we know
not

230 NATURAL HISTORY

not its native country. Perhaps the following extract from a voyage to the Isle of France alludes to it:---

"The green parrakeet with a grey cowl is about the bulk of a sparrow, and cannot be tamed;" though, however, this parrakeet is considerably larger than the sparrow. We have called it the mouse-parrakeet, on account of a large mark of mouse grey that covers the breast, the throat, the forehead, and the whole of the face; the rest of the body is olive green, except the great quills of the wing, which are of a deeper green: the tail is five inches long, the body as much; the feet are grey; the bill is white grey. All the plumage is pale and discoloured; and in point of beauty it is the most inferior of the family. Specific character of the *psittacus murinus*: "It is olive; its face, its throat, and its breast, are mouse-coloured; its wing-quills, green." Synonymes.---*Psittacus murinus*, *Gmel.* The grey-breasted parrakeet, *Latb.*

THE MUSTACHO PARRAKEET.

A BLACK streak stretches between both eyes, and two large mustachoes of the same colour rise from the lower mandible, and spread over the sides of the throat. The rest of the face is white and bluish; the tail is green above, and straw-coloured below; the back is deep green; there is some yellow on the coverts of the wings, of which the great quills are of a deep water-green; the stomach and breast are lilac. The bird is near eleven inches in length, and the tail occupies the half of it. Synonyme.---*Psittacus-Pondicerianus*, *Gmel.*

THE BLUE-FACED PARRAKEET.

THIS beautiful parrakeet is green on the upper side, and the head is painted with three different colours; the face and throat with indigo, the back of the head with brown-green, and the crown with yellow: the lower part of the neck and the breast are red snuff-colour on a ground of brown-green; the belly is green,
the

the abdomen consists of yellow and green, and the under surface of the tail is yellow. Edwards has given this bird the name of the *Red-breasted Parrakeet*; but it appears to have been represented from a specimen preserved in spirit of wine, and its colours were tarnished. This bird is a native of Amboyna.

We shall regard the *Molucca Parrakeet* as either a variety of this, or a closely-related species; its size and colours are nearly the same, only the head is entirely indigo, and there is a spot of the same colour on the belly; and the aurora-red of the breast is not waved, but mixed with yellow. The tail of these parrakeets is as long as the body, which is ten inches; their bill is reddish white. It is the first variety of the *psittacus hæmatodus*, according to Gmelin, and denominated the *Orange breasted Parrot* in Latham's synopsis. Synonymes.---*Psittacus hæmatodus*, Linn. and Gmel. *Psittacus amboinensis varia*, Briss. The red-breasted parrot, Edw. and Lath.

THE LACE-WINGED PARRAKEET.

THE wings are laced with blue, yellow, and orange; the first of these colours occupying the middle of the feathers, the two others extending to the border; the great quills are olive-brown, and the same colour is extended over all the body, except a bluish spot behind the head. The bird is near eleven lines long, of which the tail is more than a third; but the wing is also very long, and covers near half the tail, whereas in the other parrakeets the wings are much shorter. Specific character of the *psittacus olivaceus*: "It is olive; a blue spot on the back of its head; its wings variegated with blue, green, and orange." Synonyme.---*Psittacus olivaceus*, Gmel.

THE ROSE-RINGED PARRAKEET.

SO far is this parrakeet from being peculiar to the new world, as Brisson represents it, that it is there entirely

tirely unknown. It inhabits many parts of Africa, and is brought in great numbers to Cairo by the caravans of Ethiopia. The vessels that sail from Senegal or Guinea, where it is common, carry it with the negroes into the West-India islands. None of these parakeets are found on the continent of America; they are only seen near the settlements of St. Domingo, Martinico, Guadaloupe, &c. which the African vessels perpetually frequent, but at Cayenne, where negroes are very seldom imported, they never occur.

The rose-ringed parrakeet is fourteen inches long, but of this extent the tail and its two projecting feathers occupy near two thirds; these feathers are of a beryl blue; all the rest of the plumage is a light soft green, which is rather more vivid on the quills of the wings and mixed with yellow on those of the tail; a small rose collar clasps the back of the neck and joints with the black of the throat; a bluish tinge appears on the feathers of the nape of the neck, which recline upon the collar; the bill is brown red. Synonymes.---*Pittacus-Alexandria*, second variety, *Gmel.* *Pittaca torquata*, *Briss.* and *Gerini.*

THE LITTLE PARRAKEET,

With a rose-coloured head and long shafts.

THIS little parrakeet, which is not more than four inches long, measures twelve if the two long shafts be included; these are blue, the rest of the tail, which is not more than two inches and a half long, is olive green, which is also the colour of all the under side of the body, and even of the upper side, where it is only deeper; a few small red feathers appear through the plumage, on the top of the wing; the head is rose-colour, mixed with lilac, intersected and bordered by a black ring, which, rising from the throat, encircles entirely the neck. Edwards speaks with rapture of this bird: it is termed, he says, in Bengal, *fridyutab.* Synonymes.---*Pittacus erythrocephalus*, first variety, *Gmel.*

Gmel. *Psittacus Bengalensis*, *Briss.* The parrakeet from Bengal, *Albin.* The rose-headed ring parrakeet, *Lath.*

THE LONG-SHAFTED GREAT PARRAKEET.

THE colours of this parrakeet are so like those of the preceding, that they might be viewed as the same species, were they not considerably different in respect to size. This is sixteen inches long, including the two shafts of the tail, and the other dimensions are proportional; the shafts are blue, as in the preceding; the tail is of the same olive green, but deeper, and of the same tinge as the wings; the middle of the wings is rather bluer; all the green on the body is much diluted with an admixture of yellowish; the head is not entirely rose-coloured, but only the space near the eyes, and the back of the head; the rest is green, and there is no ring about the hood. Synonymes.---*Psittacus erythrocephalus*, var. 3. *Gmel.* The Malacca parrakeet, *Lath.*

THE RED-WINGED GREAT PARRAKEET.

THIS parrakeet is twenty inches, from the point of the bill to the extremity of the two long shafts of the tail: all the upper surface of the body is deep olive green, the under surface is pale green, intermixed with yellowish; on the pinion of each wing is a small red mark, and another one of dilute blue on the middle of the long feathers of the tail; the bill is red, and also the feet and nails. Specific character of the *psittacus-eupatria*: "It is green; its cheeks naked; its shoulders scarlet; its bill purplish." Synonymes.---*Psittacus eupatria*, *Linn.* and *Gmel.* *Psittaca ginginiana*, *Briss.* The gingi parrot, *Lath.*

THE RED-THROATED PARRAKEET.

EDWARDS, who describes this bird, says it is the smallest parrakeet which he had ever seen. It is not

larger than a titmouse, but its tail is longer than its body; the tail and back are of a full green; the coverts of the wings and of the throat are red; the under side of the body is yellowish green; the iris of the eye is of so deep a cast as to appear black, though in most of the parrakeets it is gold-coloured. Edwards says that it comes from India. Specific character of the *psittacus incarnatus*: "It is green; its bill, feet, and nails, carnation; its cere and orbits whitish; its throat and the coverts of its wings red." Synonymes.---*Psittacus incarnatus*, Linn. and Gmel. *Psittaca indica*, Briss. The little red-winged parrakeet, Edw. and Lath.

THE BLACK-BANDED GREAT PARRAKEET.

THE total length of this bird is fourteen inches, of which the tail is near seven. The head has a black band, and the neck a red and green collar; the breast is of a fine light red; the wings and back are of a rich Turkey-blue; the belly is deep green, sprinkled with red feathers; the tail, of which the middle quills are the largest, is coloured with green and red, with black edges. This parrakeet was, according to Seba, brought from the Papuan islands; a Dutch settler at Amboyna purchased it of an Indian for five hundred florins. This price was not extravagant, considering the beauty and gentleness of the bird; it pronounced distinctly several words in different languages, it made its salute in the morning, and sung its song. Its attachment equalled its accomplishments; for, having lost its master, it died of melancholy. Specific character of the *psittacus atricapillus*: "Above it is blue; its throat and breast red; its belly and vent green; its top black, with a green and black collar." Synonymes.---*Psittacus atricapillus*, Linn. and Gmel. *Ara moluccensis varia*, Briss.

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THE RED AND GREEN PARRAKEET.

THIS species has been denominated by Brisson the *Japan Parrakeet*; but no parrots are found in that island, or in the northern provinces of China, except such as have been carried thither; and probably this bird, of which Aldrovandus saw only the figure, came from some more southern part of Asia. Willughby observes even that both the figure and its description appeared suspicious. The plumage is composed of green, red, and a little blue; the first of these colours is spread on the upper side of the body, the second on the under side and the tail, except the two long shafts, which are green, and the blue that tinges the shoulders and the quills of the wings: there are two spots of the same colour on each side of the eye. Synonyme.---*Psittaca japonensis, Briss.*

THE CRESTED PARRAKEET.

THIS is the small parrot of Bontius, whose lustre and variety of plumage are extolled by Willughby; the pencil can hardly imitate, he says, its brilliancy and beauty. It is composed of bright red, and of rose colour, mixed with yellow and green on the wings, and with green and blue on the tail, which is very long, and projects beyond the wings ten inches; a remarkable excess in a bird which is not larger than a lark. The feathers on its head form a crest, which must be very elegant, since it is compared to a peacock's tuft in the following extract, which seems to allude to this beautiful species. "This parrakeet is about the bulk of a fiskin; on its head is a tuft of three or four feathers, resembling that of the peacock. This bird is exceedingly gentle." These little parrakeets are found in Java, in the interior parts of the country: they fly in flocks, making a great noise: they chatter much, and, when tamed, they easily repeat whatever they are taught. Synonymes.---*Psit-*

tacus javanicus, Linn. and Gmel. *Pfittaca javensis cristata coccinea*, Briss. The crested red parrakeet, Lath.

PARRAKEETS of the OLD CONTINENT,
WITH SHORT TAILS.

THE BLUE-HEADED PARRAKEET.

THE crown of the head is of a fine blue, and round the neck is an orange half-collar; the breast and rump are red, and the rest of the plumage green. Edwards says that he received this bird from Sumatra: Sonnerat found it in the island of Luçon.

This is one of the species that sleep with their head hanging downwards. It lives on *callou*, a kind of white liquor, which is obtained in the East Indies from the cocoa tree, by making an incision near the foot-stalks that support the fruit. A hollow bamboo is fixed to the extremity of the branch to collect the sap, which when first drawn is pleasant, and resembles the taste of new cyder. Specific character of the *pfittacus galgulus*: "It is green; its rump and breast scarlet; the top (of the male) blue." Synonymes.---*Pfittacus-galgulus*, Linn. Gmel. and Bor. *Pfittacula malaccensis*, Briss. The sapphire-crowned parrakeet, Edw. and Lath.

THE RED-HEADED PARRAKEET, OR GUINEA SPARROW.

THIS bird is known to bird-fanciers under the name of *Guinea Sparrow*: it is very common in that country, and is brought into Europe on account of the beauty of its plumage, its tameness, and gentleness; for it cannot be taught to speak, and has only a disagreeable scream. Many are lost in the passage, and scarcely one out of ten reaches Europe; yet they live to a considerable age in our climates, when fed on panic and canary seeds, and kept in pairs. They also lay sometimes, but the eggs seldom hatch. If one of the pair



Paroquets with short Tails.

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pair die, the other grows melancholy, and hardly ever survives. They are extremely attentive to each other; the male sits beside the female, and disgorges into her bill, and he is uneasy if she be a moment out of his sight. Thus they sweeten their captivity, by love and gentle manners. Travellers relate that, in Guinea, these birds are so numerous as much to injure the crops. It would seem that the species is dispersed over almost all the southern climates in the ancient continent; for it is found in Ethiopia, in the East-Indies, in the island of Java, as well as in Guinea.

Many persons call this bird very improperly the *Brasilian sparrow*; for it is not a native of America. The body is entirely green, marked with a spot of fine blue on the rump, and by a flame-coloured mask, mixed with a bluish tint, which covers the forehead, encloses the eye, and descends under the throat, and, in the middle of it, the bill appears of a reddish white; the tail is very short, and appears all green when closed, but if displayed it is perceived to be intersected transversely with three bars, the one red, the other black, and the third green, which borders and terminates the extremity; the pinions of the wings are blue in the male, and yellow in the female, which differs not from the former, except that its head is of a fainter red.

Clusius has very distinctly described this species under the name of *psittacus minimus*. Edwards, Brisson, and Linnæus, have confounded it with the *little American parrot painted with various colours* of Seba. But it is undoubtedly a different bird, for Seba says that his parrot has not only a collar of fine sky-blue, and a tail magnificently tinged with a mixture of five colours, viz. blue, yellow, red, brown, and deep green; but that its voice and song are pleasant, and that it easily learns to speak. It is evident that all these attributes belong not to the red-headed parakeet. Perhaps the bird, which Seba saw alive, forms a sixth species in the short-tailed parakeets of the new continent.

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238 - NATURAL HISTORY

A variety, or perhaps a contiguous species, may be found in the bird described by Edwards under the denomination of the *smallest green and red parrakeet*, which differs in no-respect from the preceding, except that its rump is red. Specific character of the *psittacus pullarius*: "It is green; its front red; its tail fulvous; its bar black; its orbits cinereous." Synonymes. --- *Psittacus pullarius*, *Linn. Gmel. and Bor.* *Psittacula guineensis*, *Briss.* *Psittacus pusillus viridis*, *Ray.* The red-headed Guinea parrakeet, *Lath.*

THE COULACISSI PARRAKEET.

THIS is the name which the bird receives in its native region, the Philippine islands, and particularly in that of Luçon. The forehead, the throat, and the rump, are red; there is a half-collar of orange on the upper side of the neck; the rest of the body, and the superior coverts of the wings, are green; the great quills of the wings are deep green on the outside, and blackish on the inside; the middle quills of the wings and those of the tail are green above and blue below; the bill, the feet, and the nails, are red.

The female is discriminated from the male by a bluish spot on each side of the head between the bill and the eye, and has no half-collar on the neck, or red on the throat, and the red tinge of its forehead is also more dilute and narrower. Synonymes. --- *Psittacus galgulus*, var. *Gmel.* *Psittacula Philippensis*, *Briss.* The Philippine parrakeet, *Lath.*

THE GOLDEN-WINGED PARRAKEET.

THE head, the small superior coverts of the wings, and the whole body, are green, only it is deeper on the body than beneath; the great superior coverts of the wings are orange; the four primary quills of the wings are deep blue on the outside, brown on the inside and at the extremity; the four next are of the same colour with the first; and lastly, those near the body

body are entirely green, as well as the quills of the tail; the bill is whitish; the feet and nails are pale flesh colour. Specific character of the *psittacus chrysopterus*: "It is green; its wings marked with a blue and fulvous spot; its orbits naked and white." Synonymes.---*Psittacus chrysopterus*, Linn. and Gmel. *Psittacus alis deauratis*, Briss.

THE GREY-HEADED PARRAKEET.

BRISSON is the first who described this bird, which he says is found in Madagascar. The head, the throat, and the lower part of the neck, are grey, inclined somewhat to green; the body is of a lighter green below than above; the superior coverts of the wings, and the middle quills, are green; the great quills are brown on the inside, and green on the outside, and at the extremity; the quills of the tail are light green, with a broad transverse black bar at their extremity; the bill, the feet, and the nails, are whitish. Specific character of the *psittacus canus*: "It is green; its head and its throat grey-green; its tail rounded, with a broad black bar." Synonymes.---*Psittacus canus*, Linn. and Gmel. *Psittacula Madagascariensis*, Briss.

THE VARIEGATED PARRAKEET.

THIS parrakeet is somewhat larger than the preceding ones; it is found in Batavia, and the island of Luçon. We shall take the description of it from Sonnerat. "The head, neck, and belly, are light green and yellowish; there is a yellow bar on the wings, but each feather that forms it is edged exteriorly with blue; the small feathers of the wings are greenish; the great ones are of a fine velvet black (so that the wings are variegated with yellow, blue, green, and black); the tail is of a light lilac colour; and near its extremity there is a very narrow black bar; the feet are grey; the bill and iris are reddish yellow." Synonymes.

Synonymes.---*Psittacus melanopterus*, *Gmel.* The black-winged parakeet, *Lath.*

THE BLUE-WINGED PARRAKEET.

THIS is a new species, received from the Cape of Good Hope, but without any accounts of its habits or of its climate. It is entirely green, except some quills of the wings, which are of a fine blue; the bill and feet are reddish.---This short description is sufficient to discriminate it from the other short-tailed Parakeets. Synonyme.---*Psittacus capensis*, *Gmel.*

THE COLLARED PARRAKEET.

THIS is found in the Philippines, and especially in the island of Luçon; it is of the bulk of the Brazilian or Guinea Sparrow; all the body is of a lively pleasant green, which is deeper on the back, and more dilute under the belly, and shaded with yellow; behind the neck and below the head, there is a broad collar, which consists, in the male, of sky-blue feathers; but in both sexes the feathers of the collar are variegated transversely with black; the tail is short, equal to the wings, and terminated in a point; the bill, feet, and iris, are blackish grey. This species has no merit, but in its shape and colours; for it is devoid of graces, and cannot be taught to speak. Specific character of the *psittacus torquatus*: "It is green; a yellow bar on its head, striped across with black." Synonyme.---*Psittacus torquatus*, *Gmel.*

THE BLACK-WINGED PARRAKEET.

THIS species also comes from the isle of Luçon, and Sonnerat thus describes it. "It is rather smaller than the preceding; the upper side of the neck, the back, the small feathers of the wings and of the tail, are of a deep green; the belly is light green and yellowish; the crown of the head is a very bright red in the male, and the feathers, which border the upper
margin

margin of the bill in the female are of the same bright red, and there is also a yellow spot above on the middle of the neck; in the male the throat is blue, in the female it is red; in both, the great feathers of the wings are black, those that cover the upper surface of the tail are red; the bill, feet, and iris, are yellow. I conceive, says Sonnerat, these two parrakeets to be the male and female, because they differ little, and are analogous in their size, shape, and colour, and inhabit the same climate; but I will not assert that they may be distinct species. Both sleep hanging from branches with their heads downwards, and are fond of the sap that flows from incisions in the cocoa tree. Specific character of the *psittacus minor*: "It is green; its top scarlet; its breast blue; its greater wing-quills black." Synonymes.---*Psittacus minor*, Gmel. The Luzonian parrakeet, Lath.

THE ARIMANON PARRAKEET.

THIS bird is found in the island of Otaheite, and lodges in the cocoa trees, whence its name *Arimanon*. We borrow the description from Commerson. We range it after the short-tailed Parrakeets, though it has a peculiar character that belongs not to any of the genus; viz. its tongue is pointed, and terminates in a pencil of short white bristles.*

The plumage is entirely of a fine blue, except the throat and the lower part of the neck, which are white; the bill and feet are red. It is very common in Otaheite, where it flutters about continually squalling. It forms flocks, and feeds on bananas, but it is difficult to domesticate; it dies of melancholy, especially if kept alone in the cage. It cannot be brought to eat any thing but the juice of fruits, and constantly rejects every kind of solid diet. Specific character of the *psittacus taitianus*: "It is blue; the feathers on its head longish; its throat white; its bill and feet red."

Synonymes.---*Psittacus taitianus*, *Gmel.* The Otaheitan Blue parakeet, *Lath.*

PARROTS of the NEW CONTINENT.

THE ARAS, OR MACAW.

OF all the parrots of America the macaw is the largest and the most magnificently decked; purple gold, and azure, blaze on its plumage; its aspect is steady, and composed; its deportment grave, and even supercilious, and as if conscious of its beauty. But its calm temper soon renders it familiar, and even susceptible of a degree of attachment. It may be domesticated without being enslaved; it never abuses the liberty which has been granted to it; it contracts a fondness for the family where it is adopted, and constantly returns from its rambling.

All these macaws are natives of the tropical parts of the new world, and inhabit both the continent and the islands; but none are found in Africa, or in India. Christopher Columbus, in his second voyage, touched at Guadaloupe, and there saw macaws, which he named *Guacamayas*. They occur even in the desert islands, and every where constitute the finest ornament of those gloomy forests with which the wild luxuriance of nature clothes the face of the earth. While Commodore Anson and his officers were contemplating the natural beauties of this solitude, a flock of aras or macaws flew over their heads; and as if these birds wished to improve the entertainment, and heighten the magnificence of the spectacle, they stopped to make numberless circles in the air, which allowed time to observe the lustre and brilliancy of their plumage. Those who witnessed this scene cannot describe it without raptures. "It is the finest sight in the world, to behold ten or twelve aras on a very green tree; never are more charming colours displayed."

When these parrots were introduced into Europe,
they

they were beheld with admiration. Aldrovandus, who, for the first time, saw a macaw at Mantua in 1572, remarks, that they were then quite novelties, and highly esteemed; and that princes received these birds from one another as rare and valuable presents.

The characters which distinguish the macaws from the other parrots of the new world are, 1. their size, which is at least double that of the others; 2. the length of the tail, which is also much longer even in proportion to the body; 3. the naked and dirty white skin, which covers both sides of the head, surrounds it below, and covers also the base of the lower mandible. The naked skin, in which the eyes are placed, gives them a disagreeable aspect. Their voice is harsh; they seem to articulate only the sound *ara*, and with a raucous thick tone, which is grating to the ear.

THE RED MACAW.

MOST authors have followed Gesner and Aldrovandus in ranging the red macaws in two species. But, on the other hand, Marcgrave, and all the travellers who have had an opportunity of viewing and comparing the birds, consider them as belonging to the same family. They inhabit only the warm climates of America, the Antilles, Mexico, the isthmus of Panama, Peru, Guiana, Brazil, &c. and are found in no part of the old continent. The great red macaw is near thirty inches in length, but of this the tail occupies almost the one half; all the body, except the wings, is vermilion, the four longest feathers of the tail are the same; the great quills of the wing are Turkey-blue above, and copper-coloured on a black ground beneath; in the middle quills the blue and green are admirably melted into each other; the great coverts are gold-yellow, and terminated with green; the shoulders are of the same red with the back; the superior and inferior coverts of the tail are blue; four of the lateral quills, on each side, are blue above, and the whole under surface cop-

per-colour, which is lighter and has more of the metallic gloss under the four great middle quills: a tuft of snuff coloured velvet feathers projects, like a cushion, on the forehead; the throat is brown-red; a white and naked membranous skin encircles the eye, covers the cheek, and sheathes the lower mandible, which is blackish, and so are the legs. This description was made from a living bird, and one of the largest and most beautiful. Travellers remark differences both in regard to colour and size, according to the different countries, or even islands, from which they are brought. We have seen some in which the tail was entirely blue, others in which it was red, and terminated with blue. Their bulk is as various; but the little Red Aras are more rare than the large ones. Both the Red and Blue Aras inhabit the same climates, and their habits and economy are exactly the same; and what we shall now relate, in regard to the one, will equally apply to the other.

Macaws live in the woods that cover the swampy grounds, where the palm trees abound, and they feed chiefly on the dates of the palmettoes, of which there are immense forests in the overflowed savannahs. They generally appear in pairs, seldom in flocks; sometimes, however, they assemble together, and their united screams are heard at a great distance. When any thing scares or surprises them, they unite in screams, and while on the wing they cry incessantly. Of all the parrots, they fly the best; they traverse the cleared lands, but never alight; they perch on the summit of trees, or on the highest branch. During the day, they roam to a distance not exceeding a league in search of ripe fruits, but always return in the evening to the same spot. Dutertre says that they are sometimes compelled by hunger to eat the apples of the manchineel, which is poisonous to man, and probably to most animals; he adds that the flesh of such birds is unwholesome, and even envenomed. Yet the aras
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are commonly eaten in Guiana, Brazil, &c. without any bad consequences.

It appears that the parrots of the new world had nearly the same dispositions with all those animals which inhabit desert tracts; they were familiar, unsuspecting, and fearless at the approach of men, who in those regions were feebly armed and few in number, and never could display their dominion. The birds which inhabited the woods of New Zealand, says Mr. Forster, were so little acquainted with men, that they calmly roosted on the branches of trees next us, and even on the ends of our muskets. We were new objects to them, which they regarded with a curiosity equal to our own. Peter of Angleria assures us, that, on the discovery of America, the parrots were caught with the noose, and almost by the hand of the sportsman; that they were seldom scared by the noise of fire arms, and did not take to flight when they saw their companions drop dead; that they preferred the trees planted near houses to the solitude of forests; and though the Indians caught them three or four times a-year, to strip them of their rich plumage, this violence did not drive them from their favourite haunts. Hence Aldrovandus, who drew his information from the early accounts of America, says that these birds are naturally attached to man, or, at least, shew no symptoms of fear in his presence; that they follow the Indians into their huts, and seem to contract an affection to the spots inhabited by these peaceful men. A part of this confidence and security adheres to the parrots which have retired to the forests. M. de la Borde informs us that this is the case with those settled in Guiana; they allow one to approach very near them without betraying suspicion or fear. And Piso says of the Brazilian birds, what may be applied to all those of the new world, that they are incautious, and easily decoyed into every kind of snare.

The aras make their nests in the holes of old rotten trees,

trees, which are very common in their native regions, and more numerous even than the rising vigorous plants: they enlarge the aperture, when it is too narrow, and line the inside with feathers. They have two hatches annually, like all the other American parrots, and each consists of two eggs, which, according to Dutertre, are as large as pigeons' eggs, and spotted like those of partridges. The male and female aras sit alternately on their eggs, or cherish their young, and both equally carry food; they never desert the charge as long as their assistance is needed, and always perch together near the nest. The young aras are easily tamed, and, in many parts of America, these birds are never taken but in the nests, because the adults are difficult to educate. Wafer says, that the Indians who inhabit the isthmus tame the macaws as we do magpies, and allow them to make excursions into the woods during the day, but that they constantly return home in the evening; that they imitate their master's voice, and the song of a bird called *chicali*. Fernandez relates that they can be taught to speak, but that their articulation is coarse and disagreeable; that, when they are kept in the house, they rear their young like other domestic birds. It is certain, that they never prattle so well as the other parrots; and, after they are tamed, they never try to escape.

The Indians work the plumage into festival caps, and other ornaments; they also stick some of the rich feathers into the cheek; and through the nostrils, or the ears. The flesh of the aras, though commonly hard and black, is not unpleasant food, and makes excellent soup; and, in general, the parrots are usually eaten as the most plentiful game in the settlement at Cayenne.

The macaw is, more than any bird perhaps, subject to the cramp, which is more violent, and more quickly mortal, in the hot countries, than in the temperate climates. But in South America, these birds commonly

monly die of the falling sickness, and this is also the fate of all the other parrots, which are equally subject to that disorder, in the domestic state. The Indians, who rear the aras in their huts with the view to sell their feathers, have a remedy for the epilepsy; they cut the point of the toe, and the discharge of a single drop of blood works an immediate cure. The same operation succeeds equally in procuring relief to the other disorders incident to the domestic state. This epilepsy, or cramp, as it is called in the colonies, invariably happens to domesticated parrots when they perch on a bit of iron, such as a nail, a curtain rod, &c. so that great care is taken that they alight only on wood. Specific character of the *psittacus-macaw*: "It is red; its wing quills blue above, rufous below; its scapular feathers variegated with blue and green; its cheeks naked and wrinkled."---That of *psittacus aracangua*: "It is dilute scarlet; its scapular feathers yellow, terminated with green; its wing-quills blue above, rufous below; its cheeks naked and wrinkled." Synonymes.---1. *Psittacus-macaw*, -Linn. Gmel. Scop. and Bor. *Ara Brasiliensis*, Briss. and Gerini. *Psittacus maximus alter*, Ray, Will. and Klein. The red and blue macaw, Edw. Alb. Banc. and Lath. 2. *Psittacus-aracanga*, Gmel. *Araracangua*, Ray and Will. *Ara Jamaicensis*, Briss. *Psittacus capite cœruleo*, Klein. The red and yellow macaw from Jamaica, Alb. Banc. and Lath.

THE BLUE MACAW.

NATURALISTS have divided this into two species; the first is the blue and yellow ara of Jamaica, and the second is the blue and yellow ara of Brasil. But these birds are not only of the same species, but inhabit the same parts of South America.

It is easy to describe the blue macaws: the upper side of the body, the wings, and the tail, are entirely azure, and the under side of the body is fine yellow. The

The other, called *canidé*, has all the plumage under its belly and round its neck as yellow as fine gold; the upper side of the back, the wings, and the tail, are of the purest blue. We might say that it is attired below with a cloth of gold, and mantled above with violet figured damask. Thevet characterizes equally well the two species of aras: "Nature has delighted to pourtray this beautiful bird, called by the savages *carinde*, clothing it with a plumage so beautiful and charming, that it is impossible not to admire the workmanship. This bird exceeds not in bulk the raven, and its plumage, from the belly to the throat, is yellow like fine gold; the wings, and the tail, which is very long, are of a fine azure-colour. There is another bird resembling this in size, but different in its colours; for its plumage, instead of being yellow, is of a red like fine scarlet, and the rest azure. The blue aras never mingle with the red, though they frequent the same spots, and live in harmony. Their voice is somewhat different, for the savages can distinguish them by the cry alone. It is said that the blue ones do not pronounce the word *ara* so distinctly. Specific character of the *psittacus ararauna*: "Above it is blue, below yellow; its cheeks naked, with feathery lines." Synonymes.---*Psittacus-ararauna*, *Linn. Gmel. Scop. and Bor.* *Psittacus maximus cyano-croceus*, *Ray, Sloane, and Will.* 1. *Ara Jamaicensis cyano-crocea*, *Briss.* 2. *Ara Brasiliensis cyano-crocea*, *Id.* *Psittacus vertice viridi, cauda cyanea*, *Klein.* The blue and yellow macaw, *Edw. Alb. and Latb.*

THE GREEN MACAW.

THE green macaw is much rarer than the two preceding; it is also much smaller. It consists of only one species, though some authors have divided it into two; because they confound it with the green parakeet, which they call the *ara parakeet*, on account of the length of its tail, and its distinctly articulating the word



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The Brazilian Green Macaw.

Published Aug. 1768.



word ara : but notwithstanding these properties it is still a parakeet, and very common in Cayenne ; whereas the green ara is there altogether unknown. Sloane says that the little macaw, or little green ara, is very frequent in the woods of Jamaica. But Edwards properly observes that this is certainly a mistake, because, though he made several applications, he could procure none from his correspondents in that island. Perhaps Sloane confounded the long-tailed green parakeet with the green ara.

The green macaw is a very beautiful bird. Its length, from the tip of the bill to the end of the tail, is about sixteen inches ; its body, both above and below, is green, which according to the position is golden and sparkling or deep olive ; the great and small quills of the wing are beryl blue, on a brown ground, and the under side copper coloured ; the under side of the tail is the same, and the upper side painted with beryl blue, melting into olive green ; the green on the head is brighter and less mixed with olive than that on the rest of the body ; at the base of the upper mandible, on the face, there is a black border of small linear feathers that resemble bristles ; the white naked skin that surrounds the eyes is sprinkled with small pencils of the same black bristles ranged in rows ; the iris of the eye is yellowish.

This bird is as rare as it is amiable for its social temper and gentle disposition. It soon grows familiar with persons whom it sees frequently, and is pleased to receive and repay their caresses. But it has an aversion to strangers, and particularly to children, and flies at them furiously. Like all other domesticated parrots, it clings to the finger when presented to it ; it also clasps wood : but in winter, and even in summer, when the weather is cool and rainy, it prefers the arm or the shoulder, especially if the person has woollen clothes, for in general it likes warm stuffs. It is also fond of kitchen stoves when they are cooled so

much as to retain only a gentle warmth. For the same reason, it avoids sitting on hard bodies which quickly communicate cold, such as iron, marble, glass, &c. and in cold rainy weather, though in summer, it shudders and trembles if water be thrown upon it. However, in sultry days, it bathes of its own accord, and often dips its head in the water.

If one stroke it gently, it spreads its wings, and squats; it then utters a disagreeable cry, which resembles the chatter of the jay, raising its wings during the action, and bristling its feathers: and this habitual cry seems to express either pleasure or languor. Sometimes it has a short shrill cry, which is less equivocal than the former, and denotes joy and satisfaction; for it is generally addressed to persons whom it loves; but this cry also marks its impatience, fits, and its pettish gusts of ill humour. But it is impossible to be precise on this subject; for birds organized like the parrots perpetually vary or modify their voice, as they are prompted by imitation.

The green macaw is jealous: it is fired at seeing a young child sharing in its mistress's caresses and favours; it tries to dart at the infant, but, as its flight is short and laborious, it only shews its displeasure by gestures and restless movements, and continues tormented by these fits till its mistress is pleased to leave the child, and take the bird on her finger. It is then overjoyed, murmurs satisfaction, and sometimes makes a noise exactly like the laugh of an old person. Nor can it bear the company of other parrots; and, if one be lodged in the same room, it will strive to deprive it of every comfort. It would appear, therefore, that the bird can suffer no rivals whatever in its mistress's favour, and that its jealousy is founded on attachment; accordingly it takes no notice when it sees a different person fondle a child.

It eats nearly the same things that we do. It is particularly fond of bread, beef, fried fish, pastry,
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and sugar; but it seems to prefer roasted apples, which it swallows greedily. It cracks nuts with its bill, and picks them dexterously with its claws. It does not chew the soft fruits, but sucks them, by pressing its tongue against the upper mandible; and, with respect to the harder sort of foods, such as bread, pastry, &c. it bruises or chews them, by pressing the tip of the lower mandible upon the most hollow part of the upper. Like all the other parrots, the blue macaw uses its claws with great dexterity; it bends forward the hind toe to lay hold of the fruits and crumbs which are given to it, and to carry them to its bill. The parrots, therefore, employ their toes nearly as the squirrels or monkeys; they also cling and hang by them. The green ara almost always sleeps in this way, hooked to the wires of its cage. There is also another habit common to the parrots, viz. they never climb or creep without fastening by the bill, with which they begin, and use the feet only as a second point of their motion.

The nostrils are not visible in this macaw, as in most of the other parrots; instead of being placed in the uncovered part of the horn of the bill, they are concealed in the first small feathers that cover the base of the upper mandible, which rises and forms a cavity at its root when the bird makes an effort to imitate difficult sounds: in such cases the tongue folds back at the tip, and recovers its shape when it eats; a power not commonly possessed by birds which can only move it backwards or forwards in the direction of the bill. The green ara is as hardy as most of the other parrots, or even more so. It learns more easily, and pronounces more distinctly, than the red or blue aras. It listens to the other parrots, and improves from them. Its cry is like that of the other aras, only its voice is not so strong, and does not articulate so distinctly the sound ara.

It is said that bitter almonds will kill parrots. Par-
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ley, of which they are very fond, if taken even in small quantity, is also very pernicious; as soon as they eat it, a thick viscous liquor runs from the bill, and they die in an hour or two. Specific character of the *psittacus severus*: "It is green; its cheeks naked; the quills of its wings and and tail blue, below purplish." Synonymes.---*Psittacus severus*, Linn. Gmel. Scop. and Bor. 1. *Ara Brasiliensis viridis*, Briss. 2. *Ara Brasiliensis erythrochlora*, Id. Maracana, Ray and Will. The Brazilian green macaw, Edw. Sloane, and Lath.

THE BLACK MACAW.

THE plumage is black, with reflections of shining green. It differs from the other aras in some of its habits; it never approaches the settlements, but remains on the arid and barren summits of rocks and mountains. Læet seems to mention this bird by the name of *ararauna* or *machao*, whose plumage, he says, is black, but so well mixed with green that, in the sun beams, it shines admirably; the legs are yellow; the bill and the eyes reddish, and it resides in the interior parts of the country. Specific character of the *psittacus ater*: "It is black, with a greenish splendour; its bill and eyes are reddish; its legs yellow." Synonymes.--*Psittacus ater*, Gmel. The black macaw, Lath.

THE AMAZONS AND CRICKS.

THE name of Amazon parrots is given to all those which are marked with red on the fan of the wing; they have received that appellation in America, because they are brought from the country of the Amazons. The term *crick*, is given to those which have no red on the fan, but only on the wing: this too is the name appropriated by the savages of Guiana to these parrots. They are also distinguished from Amazons by other properties, viz. the plumage of the Amazons is shining, and even dazzling, whereas the green colour of the Cricks is dull and yellowish; in the Ama-
zons

zons the head is covered with a fine and very bright yellow, but, in the Cricks, this yellow is dull and intermixed with other colours; the Cricks are rather smaller than the Amazons, which are much smaller than the Aras; the Amazons are exceedingly beautiful and rare, but the Cricks are the most common of the parrots, and the most inferior in point of beauty; they are extensively spread, while the Amazons are hardly ever found, except at Para, and in some other countries bordering on the river of Amazons.

The Amazons, the Cricks, and all the other parrots of America, construct their nests in holes formed in decayed trees by the woodpeckers, and only lay two eggs twice a year, which the cock and hen hatch by turns; it is said that they never forsake their nest, and persist in hatching, though their eggs be handled and deranged. In the love season, they assemble and breed in the same haunt, and search their food in company; when their appetite is satisfied they make a continual and noisy babbling, shifting their place incessantly, and fluttering from tree to tree, till the darkness of night and the fatigue of action invite to repose. In the morning they are observed on the naked branches, at sun-rise, and they remain quiet till the dew is dried from their plumage, and their warmth recovered; then they rise in a flock, with a noise like that of grey crows, but louder. They breed in the rainy season.

The savages commonly take the parrots in the nest, because they are more easily reared and better tamed. But the Caribbs, according to Labat, catch them also after they are old: they observe the trees on which they perch in great numbers in the evening, and, after dark, they carry near the spot lighted coals, on which they throw gum and green pimento; the birds are suddenly involved and stifled in thick smoke, and fall to the ground; the savages then seize them, tie their feet, and recover them from the suffocation, by throw-

ing water on the head. They also bring down the parrots without hurting them much, by shooting them with blunt arrows. But the old ones thus caught are difficult to tame. There is only one method of rendering them tractable; it is to blow the smoke of tobacco into their bill, which partly intoxicates them, and makes them gentle and pliant. If they grow mutinous again, the dose is repeated, and thus in the course of a few days their disposition is softened. We can hardly form an idea of the envenomed temper of the wild parrots; they bite cruelly without provocation, and will not quit their hold. Tobacco smoke is also used to cure them of their noisy disagreeable cry.

Some authors allege that the female parakeets never learn to speak; but this is a mistake: they are more easily taught than the males, and even more docile and gentle. Of all the American parrots, the Amazons and the Cricks are the most susceptible of education, especially when caught young. As the savages traffic with each other in the feathers of parrots, they claim a certain number of trees on which these birds make their nests. This is a kind of property from which they derive an income by selling the parrots to strangers, or by bartering the feathers with other savages. These trees descend from father to son, and are often their richest inheritance.

THE YELLOW-HEADED AMAZON PARROT.

THE crown of the head is a fine bright yellow; the throat, the neck, the upper side of the back, and the superior coverts of the wings, of a brilliant green; the breast and the belly green, with a little yellowish; the fans of the wings are of a bright red; the quills of the wings are variegated with green, black, violet-blue, and red; the two exterior quills, on each side of the tail, have their inner webs red at their origin, and then deep green, which, at the extremity, changes into
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a yellowish green; the bill is red at the base, all the rest of it cinereous; the iris is yellow; the feet grey, and the nails black.

We must observe that Linnæus commits an error in saying that this bird has naked cheeks; which confounds the amazons with the macaws, to which alone that character belongs. On the contrary, the amazons are feathered on the cheeks, or between the bill and the eyes, and like all the other parrots, have only a very small circle of naked skin round the eyes. Specific character of the *psittacus nobilis*: "It is green; its cheeks naked; its shoulders scarlet." Synonymes. --- *Psittacus nobilis*, Linn. and Gmel. The noble parrot, Latb.

There are two other species, or perhaps varieties, related to the preceding.

The red and green parrot of Cayenne, called in Guiana the bastard amazon, or half-amazon. It is said to be a cross-breed of the amazon with another parrot. It is indeed inferior in beauty to the one just described; for it has not the fine yellow on the face near the root of the bill; the green colour of its plumage is not so brilliant, but has a yellowish cast; the red on the plumage is the only colour which is similar and disposed in the same way; there is also a shade of yellowish under the tail; the bill is reddish, and the feet grey; and, as it has the same bulk, we can hardly doubt but that it is nearly related to the species of the amazon.

The second variety was first noticed by Aldrovandus, and, according to his description, it appears to differ from this amazon parrot only in the colours of its bill, which that author says is ochrey on the sides of the upper mandible, whose ridge is bluish, with a small white bar near the tip; the lower mandible is also yellowish in the middle, and lead colour through the rest of its length. But all the colours of the plumage, the size, and shape of the body, being the same

as in the yellow-headed amazon, it may be only a variety.

THE TARABE, OR RED-HEADED AMAZON.

THIS parrot, which is described by Marcgrave as a native of Brasil, is not found in Peru. The head, the breast, the pinions, and tops of the wings, are red; and hence it ought to be ranged with the amazon parrots. All the rest of its plumage is green; the bill and the feet are dull ash-colour. Specific character of the *psittacus taraba*: "It is green; its head, its throat, and the small coverts of its wings, are red." Synonymes.---*Psittacus taraba*, *Gmel.* The red-headed amazon's parrot, *Lath.*

THE WHITE-HEADED AMAZON.

IT would be more accurate to name this bird the *white-fronted parrot*; because the white is generally confined to the face. But sometimes it surrounds the eye, and extends to the crown of the head; and often it only borders the face. The species appears subject, therefore, to variety. In one specimen, the plumage was also of a deeper green, and less waved with black: in another, it was lighter, mixed with yellowish, and intersected with black festoons all over the body; the throat and the fore-side of the neck are of a fine red. That colour is not so much spread in the former, or so bright, but there is a spot of it under the belly. In both of them, the quills of the wing are blue; those of the tail yellowish green, tinged with red in the first half; and, on the fan, a red spot is perceived, which is the livery of the amazons. Sloane says that these parrots are frequently brought from Cuba to Jamaica, and that they occur also in St. Domingo. They are found in Mexico, but never in Guiana. Brisson divides them into two species; and this mistake was occasioned by Edwards's white-head parrot being different from his. The Martinico parrot mentioned by Lebat, in which

which the upper side of the head is slate-colour, with a little red, is different from our white-headed parrot, though Brisson asserts that they are the same. Specific character of the *psittacus leucocephalus*: "It is green; its wing-quills blue; its front white; its orbits snowy." Synonymes.---*Psittacus leucocephalus*, Linn. Gmel. and Bor. White-headed parrot, Edw. White-fronted parrot, Latb.

THE YELLOW AMAZON.

THIS bird is probably a native of Brazil, since Salerne says that he saw one which pronounced Portuguese words. We are certain at least that it comes from the new world, and the red colour of its vent assigns its place among the Amazons.

All the body and the head are of a very fine yellow; the fans are marked with red, and also the great quills of the wings, and the lateral quills of the tail; the iris is red; the bill and feet are white. Specific character of the *psittacus aurora*: "It is bright yellow; its *axille*, the margins of its wings, and its greater wing-quills, red outwards in the middle." Synonymes.---*Psittacus aurora*, Gmel. Aurora parrot, Latb.

THE AOUROU-COURAOU PARROT.

THE aourou-couraou of Marcgrave is a handsome bird, and is found in Guiana and Brazil. Its face is bluish, with a bar of the same colour below the eyes; the rest of the head is yellow; the feathers of the throat are yellow, and edged with bluish green; the rest of the body is light green, which assumes a yellowish tint on the back and belly; the fan of the wing is red; the superior coverts of the wings green; the quills of the wing are variegated with green, black, yellow, blue, and red; the tail is green, but, when the feathers are spread, they appear fringed with black, red, and blue; the iris is gold colour; the bill is blackish; and the feet cinereous. Specific character

of the *psittacus æstivus*: "It is green, somewhat spotted with yellow; its front blue; its shoulders blood-coloured; its orbits carnation." Synonymes. --- *Psittacus æstivus*. *Aiuru-curau*, *Ray* and *Johnstone*. Common Amazon's parrot, *Lath*.

There are also several varieties which may be referred to this species.

1. The bird mentioned by Aldrovandus under the appellation of *psittacus viridis melanorinchos*, which differs but little from the preceding.

2. There is another also described by Aldrovandus, in which the face is beryl blue with a bar of the same colour above the eyes. The crown of the head is also of a paler yellow; the upper mandible is red at the base, bluish in the middle, and black at the end; the lower mandible is whitish. In all other properties, the colours are precisely the same as in the *aourou-courau*. It is found in Guiana, Brazil, and Mexico, and also in Jamaica; and it must be very common in Mexico, since the Spaniards give it a proper name, *Catherina*. From Guiana it has probably been carried into Jamaica, which is at too great a distance from the continent to correspond with the excursions of the parrots. Labat says, that they cannot fly from one island to another, and that those of the different islands may be distinguished. The parrots of Brazil, Cayenne, and the rest of the continent of America, which are seen in the islands, have been transported thither, and few which are natives of the islands are found on the continent, on account of the difficulty of the passage.

3. Another variety is the *aiuru-curuca* of Marcgrave. There is on the head a blue cap mixed with a little black, in the midst of which is a yellow spot; this indication differs in nothing from the description which we have given. But the bill is ash-coloured at the base, and black at the end; this is the only slight variation.

4. Marcgrave notices another variety, and remarks that it is like the preceding; yet our nomenclators have ranged them in different species, and even doubled these. The only difference is that the yellow extends a little more on the neck.

5. *The yellow-fronted Amazon parrot* of Brisson (*Psittacus Amazonicus fronte lutea*). The only difference is that the face is whitish, or pale yellow, but in the other it is blueish; which is by no means sufficient to constitute a distinct and separate species.

THE CRICK PARROT, WITH YELLOW THROAT.

THE whole of the head, the throat, and the lower part of the neck, are of a very fine yellow; the under side of the body is of a shining green, and the upper side also green, but with a little mixture of yellow; the fan of the wing is yellow, whereas the same part is red in the Amazons; the first row of the coverts of the wing is red and yellow; the other rows are of a fine green; the quills of the wings and of the tail are variegated with green, black, violet, yellow, and red; the iris is yellow; the bill and feet whitish. Father Bougot gives the following account of its disposition and habits. "It is very susceptible of attachment to its master; it is fond of him, but requires frequent caresses, and seems disconsolate if neglected, and vindictive if provoked. It has fits of obstinacy; it bites during its ill humour, and immediately laughs, exulting in its mischief. Correction and rigorous treatment only harden it, and make it more stubborn and wayward; gentle usage alone succeeds in mollifying its temper.

"The inclination to gnaw whatever it can reach, is very destructive in its effects; it cuts the cloth of the furniture, splits the wood of the chairs, and tears paper, pens, &c. And, if it be removed from the spot, its proneness to contradiction will instantly

hurry it back. But this mischievous bent is counter-balanced by agreeable qualities, for it remembers easily what it is taught to say. Before articulating it claps its wings and plays on its roost; in the cage it grows dejected and continues silent. It chatters less in winter than during the summer months, when it never ceases from morning to night.

"In its cheerful days it is affectionate, receives and returns caresses, and listens and obeys; though a peevish fit often interrupts the harmony. It seems affected by the change of weather, and becomes silent; the way to reanimate it is to sing beside it; it then strives by its noisy screams to surpass the voice which excites it. It is fond of children; in which respect it differs from other parrots. It contracts a predilection for some of them, and suffers them to handle and carry it; it caresses them, and, if any person touches them, it bites at him fiercely. If its favourites leave it, it is unhappy, follows them, and calls loudly after them. During moulting it is much reduced, and seems to endure great pain; and that state lasts near three months. Its ordinary food is hemp-seed, nuts, fruits of all kinds, and bread soaked in wine; it would prefer flesh, but that diet makes it low-spirited and inactive, and after some time occasions its feathers to drop. It is also observed to keep its food in bags under the chin, and to ruminate." Specific character of the *psittacus ochropterus*: "It is green; its front and orbits whitish; its top, its cheeks, its throat, and the more remote coverts of its wings, fine yellow." Synonymes.--*Psittacus ochropterus*, *Gmel.* *Psittacus Amazonicus gutture luteo*, *Briss.* *Psittacus viridis alius*, *capite luteo*, *Fris. and Klein.* Yellow-winged parrot, *Lath.*

THE MEALY CRICK PARROT.

THIS is the biggest of all the parrots of the new world, except the aras. It is called *meunier*, or the *miller*, by the settlers at Cayenne, because its plumage, whose ground colour is green, appears sprinkled with meal: there is a yellow spot on the head; the feathers on the upper surface of the neck have a broad edging of brown; the under side of the body is of a lighter green than the upper side, and is not mealy; the outer quills of the wings are black, except a part of the outer webs, which are blue; there is a large red spot on the wings; the quills of the tail are of the same colour with the under side of the body, from their origin to three fourths of their length, and the remaining fourth yellowish green.

This parrot is one of the most esteemed, as well for its magnitude and the singularity of its colours, as for the facility with which it learns to speak, and the mildness of its disposition. There is only one slight defect in its appearance, which is, that its bill is like whitish horn. Specific character of the *psittacus pulverulentus*: "It is green, and above is sprinkled with mealy specks; a bright yellow spot on its head, and a red one on its wings." Synonymes.---*Psittacus pulverulentus*. *Gmel.* Mealy green parrot, *Latb.*

THE RED AND BLUE CRICK PARROT.

THIS parrot has been mentioned by Aldrovandus, and many other naturalists have copied his account; but they do not agree in their descriptions. According to Linnæus, the tail is green; Brisson represents it as rose-coloured. The epithet *variegated* (ποικίλος) suits it well, considering the diversity and richness of its colours; blue and soft red predominate; the blue appears on the neck, the breast, and the head, whose crown is marked with a yellow spot; the rump is of the same colour; the belly is green; the top of the back

262 NATURAL HISTORY

back light blue; the quills of the wings and of the tail are all rose-colour; the coverts of the former are mixed with green, yellow, and rose-colour; those of the tail are green; the bill is blackish; the feet are reddish grey." Aldrovandus does not inform us from what country this bird is brought; but as there is red on its wings, and a yellow spot on the head, we have arranged it with the American cricks. Specific character of the *psittacus cœruleocephalus*: "It is blue; its belly, its rump, and its tail, are green; its top bright yellow; the quills of its wings and tail red." Synonymes. --- *Psittacus cœruleocephalus*, *Linn.* and *Gmel.* *Psittacus guianensis cœruleus*, *Briss.* *Psittacus versicolor*, *Ray.* Red and blue parrot, *Will.* and *Lath.*

THE BLUE-FACED CRICK PARROT.

THIS parrot came from the Havanna, and it is probably common in Mexico and near the isthmus of Panama; but it is not found in Guiana. It is much smaller than the mealy crick, its length being only twelve inches. Among the quills of the wings, which are indigo colour, there are some red ones; the face is blue; the breast and stomach are of a soft red or lilac, and waved with green; all the rest of the plumage is green, except a yellow spot on the lower part of the belly. Specific character of the *psittacus havanensis*: "It is green; its front and throat ash-blue; a large red spot on its breast; its orbits cinereous." Synonymes. --- *Psittacus havanensis*, *Gmel.* *Psittacus Amazonicus gutture cœruleo*, *Briss.* Blue fronted parrot, *Lath.*

THE CRICK PARROT.

THE name *crick* is bestowed on this bird at Cayenne, where it is so common that the same appellation is extended to a considerable tribe of parrots. It is smaller than the Amazons; but we ought not, with some authors, to range it among the parrakeets: they have mistaken it for the Guadaloupe parrakeet, be-
cause

cause it is entirely green. They would have avoided this error, if they had consulted Marcgrave, who says expressly, that it is as large as a hen; and this character is alone sufficient to exclude it from the parrakeets. This crick has also been confounded with the *tabua*, or *tavoua*, which is widely different; for the *tavoua* has no red on its wings, and is therefore neither an amazon nor a crick, but rather a popinjay.

The crick is near a foot long from the tip of the bill to the extremity of the tail, and its wings, when closed, extend a little beyond the middle of the tail; both the upper and under surface are of a light handsome green, particularly on the belly and neck, where the green is very brilliant; the front and the crown of the head are also of a pleasant green; the cheeks are greenish-yellow; there is a red spot on the wings, and their quills are black, terminated with blue; the two middle quills of the tail are of the same green with the back, and the outer quills, being five on either side, have each an oblong red spot on the inner webs, and which spread more and more from the inner quill to the outer one; the iris is red; the bill and feet whitish.

Marcgrave notices a variety in this species, which differs only in point of size, being rather smaller than the preceding. The former he calls *aiuru-catinga*, and the latter *aiuru-apara*. Specific character of the *psittacus agilis*: "It is green; the coverts of its bluish primary wing-quills are fulvous; its tail scarcely elongated, red below; its orbits cinereous." Synonyms.---*Psittacus agilis*, Linn. Gmel. and Bor. *Psittacus cayensis*, Briss. Little green parrot, Edw. Agile parrot, Lath.

THE BLUE-HEADED CRICK PARROT.

THIS bird is described by Edwards; and it is found in Guiana. All the fore-side of the head and the throat are blue, which colour is terminated, on the

the breast, by a red spot; the rest of the body is green, which is deeper on the back than beneath; the superior coverts of the wings are green; their great quills blue, those adjacent red, and the upper part blue at the extremity; the quills near the body are green; the quills of the tail are green on their upper surface as far as the middle, and yellowish green below; the lateral quills are red on their exterior webs; the iris is orange-coloured; the bill is blackish cinerous, with a reddish spot on the sides of the upper mandible; the feet are flesh coloured, and the nails black. Synonymes.---*Psittacus autumnalis*, 1st var. *Gmel.* Blue-headed creature, *Bancr.* Blue-faced green parrot, *Edw.* and *Lath.*

VARIETIES OF THE BLUE-HEADED CRICK.

1. THE *cocho parrot*, mentioned by Fernandez, which differs inasmuch as it is variegated with red and whitish instead of red and bluish; in every other respect it is the same with the blue-headed crick.

2. The *lesser green parrot* of Edwards, which is distinguished only by its red face and orange cheeks; its other colours, and its size, are the same with those of the blue-headed crick.

3. The *Brazilian green parrot* of Edwards is also another variety. Its face, and the top of its neck, are of a fine red, whereas these parts are blueish in the blue-headed crick; but, in other respects, the resemblance is exact.

THE VIOLET-HEADED CRICK PARROT.

THIS parrot is found in Guadaloupe, and was first described by Father Dutertre. "Its colours are so beautiful," he says, "and so singular, that it deserves to be selected from all the rest for description. It is almost as large as a hen; its bill and eyes are edged with carnation; all the feathers of its head, of its neck, and of its belly, are violet, mixed with a tincture

ture of green and black, changing like the neck of a pigeon; all the upper side of the back is of a very brown green; the great quills of the wings are black, all the others yellow, green, and red; on the coverts of the wings are two rose-shaped spots of the same colours. When it bristles the feathers of its neck, it makes a fine ruff round the head, on which it seems to pride itself, as the peacock does on its tail; it has a strong voice, speaks very distinctly, and is easily taught, if taken young.

Dutertre remarks in particular, that they are of a gentle disposition, and easily tamed: "We have two," says he, "which build their nests in a large tree a hundred paces from our hut; the male and female sit alternately, and come one after another to the hut for food, and bring their young ones with them as soon as they can leave the nest."

We may observe that, as the cricks are the most common kind of parrots, and at the same time speak the best, the savages have amused themselves with rearing these, and in trying to vary their plumage. The plucking of the feathers hurts the birds greatly, and so many die of it, that those which survive are very rare, and are sold much dearer than the other parrots. Specific character of the *psittacus violaceus*: "It is violet, variegated with green, and a mixture of black; its back partly dusky green; its greater wing-quills black, the rest variegated with yellow, green, and red; a rosy spot on the coverts." Synonymes.---*Psittacus violaceus*, Linn. and Gmel. *Psittacus aquarum-lupiarum insulæ*, Briss. Ruff-necked parrot, Lath.

THE POPINJAYS.

THESE parrots are in general smaller than the Amazons, from which and from the cricks they are distinguished by having no red on the wings. They are all peculiar to the new world.

THE PARADISE POPINJAY PARROT.

THIS parrot is very handsome. Its body is yellow, and all the feathers edged with dark glossy red; the great quills of the wings are white, and all the others yellow, like the feathers on the body; the two quills in the middle of the tail are also yellow, and all the lateral ones red, from their origin as far as two thirds of their length; the rest is yellow; the iris is red; the bill and feet white.

It would seem that this species admits of some variety; for in the specimen described by Catesby, the throat and belly were entirely red, though there are others in which these parts were yellow, and the feathers only edged with white. Perhaps the breadth of the red borders differs according to age or sex, which would account for the diversity.---The bird is found in the island of Cuba. Specific character of the *psittacus paradisi*: "It is yellow; its throat, its belly, and the base of its tail-quills, are red." Synonymes.---*Psittacus-paridisi*, Linn. Gmel. and Klein. *Psittacus luteus insulæ Cubæ*, Briss. Cuba parrot, Brown and Catesby. Paradise parrot, Lath.

THE MAILED POPINJAY PARROT.

THIS appears to be the same with the variegated parrot of the old continent, and we presume that those imported into France had been carried from the East Indies to America; and if some are found in the interior parts of Guiana, they have been naturalized, like the canaries, and several other birds and quadrupeds, introduced by navigators. No naturalist or traveller who has visited the new world takes notice of it, though it is well known to bird-fanciers. Its voice is different from that of the other parrots of America, and its cry is sharp and shrill. All these circumstances conspire to prove that it is not indigenous in the new world.

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The top of the head and the face are surrounded with narrow long feathers, white and radiated with blackish, and which it bristles when irritated, and disposes into a fine ruff. The nape and sides of the neck are of a fine brown red, and edged with lively blue; the feathers on the breast and stomach are clouded with the same colours, only more dilute, and with a mixture of green; a more beautiful silky shining green covers the upper side of the body and of the tail, except that some of the lateral feathers on each side appear blue exteriorly, and the primaries of the wing are brown, and also the under surface of those of the tail. Synonyme.---*Psittacus accipitrinus*, var. *Gmel.*

THE TAVOUA PARROT.

THIS species is found in Guiana; and it sometimes approaches the dwellings. Bird-fanciers are eager to obtain it, for of all the parrots it speaks the best, and even excels the red-tailed grey parrot of Guinea; and yet it was not known till lately, which is somewhat singular. But its talents are attended with an essential defect; it is faithless and mischievous, and bites cruelly when it pretends to caress: it would even seem to lay plans of malice, and its physiognomy, though sprightly, is dubious. It is an exceedingly beautiful bird, and more nimble and agile than any other parrot.

Its back and its rump are of a very beautiful red; it has also some red on the front, and the upper side of its head is light blue; the rest of the upper side of the body is a fine full green, and the under side of a lighter green; the quills of the wings are of a fine black, with deep blue reflections; so that in some positions they appear entirely of a very deep blue: the coverts of the wings are variegated with deep blue and green. Specific character of the *psittacus festinus*: "It is green; its front purplish; its eye-brows and
L 1 2 throat

throat blue; its back blood-coloured." Synonymes. --- *Psittacus festivus*, Linn. and Gmel. Festive parrot, Latb.

THE RED-BANDED POPINJAY PARROT.

THIS parrot is found in St. Domingo. On the front a small red band extends between the eyes. This and the blue tinge of the primaries of the wings are almost the only interruptions in the colour of the plumage, which is all green and dark complexioned, and scaled with blackish on the back, and with reddish on the stomach. It is nine inches and a half long. Specific character of the *psittacus dominicensis*: "It is green; a red band on its front; black crescents on its neck and back; its wing-quills blue." Synonymes. --- *Psittacus dominicensis*, Gmel. Red-banded parrot, Latb.

PURPLE BELLIED POPINJAY PARROT.

THIS parrot is found in Martinico. It is not so beautiful as the preceding: the face is white; the crown and sides of the head blue cinereous; the belly variegated with purple and green, but the purple predominates; all the rest of the body, both above and below, is green; the fan of the wing white; the quills variegated with green, blue, and black; the two middle quills of the tail are green, the others variegated with green, red, and yellow; the bill is white; the feet are grey, and the nails brown. Synonyme. --- *Psittacus leucocephalus*, var. 3, Gmel.

POPINJAY WITH BLUE HEAD & THROAT.

THIS parrot is found in Guiana, though rare; but it is little sought after, for it cannot be taught to speak. The head, neck, throat, and breast, are of a fine blue, which receives a tinge of purple on the breast; the eyes are surrounded by a flesh-coloured membrane, whereas in all the other parrots this membrane is white; on each side of the head is a black

a black spot; the back, the belly, and the quills of the wing, are of a handsome green; the superior coverts of the wings are yellowish green; the lower coverts of the tail are of a fine red; the quills of the middle of the tail are entirely green; the lateral ones are of the same green colour, but they have a blue spot, which extends the more the nearer the quills are to the edges; the bill is black, with a red spot on both sides of the superior mandible; the feet are grey. Specific character of the *psittacus menstruus*: "It is green; its head bluish; its vent black." Synonymes. --- *Psittacus menstruus*, Linn. Gmel. and Scop. Blue-headed parrot, Edw. and Lath.

THE VIOLET POPINJAY PARROT.

THIS parrot is common in Guiana; and, though handsome, is not much esteemed, because it never learns to speak. The wings and tail are of a fine violet; the head and the borders of the face are of the same colour, which is waved on the throat, and melted into the white and lilac; a small red streak edges the front; all the upper side of the body is brown, obscurely tinged with violet; the under side of the body is richly clouded with blue-violet and purple-violet; the lower coverts of the tail are rose-colour, which also tinges exteriorly the edges of the outer quills of the tail through their first half. Specific character of the *psittacus purpureus*: "Above it is dark brown, below purple; its top and its cheeks black; its orbits blue; a collar with dirty points; and the quills of its wings and tail blue." Synonymes. --- *Psittacus purpureus*, Gmel. Little dusky parrot, Edw. and Lath.

THE SASSEBE PARROT.

OVIEDO is the first who has mentiond this popinjay under the name *Xaxebeds*, or *Sassebe*. Sloane makes it a native of Jamaica. The head, and both the
upper

upper and under surface of the body, are green; the throat and the lower part of the neck are of a fine red; the quills of the wings are some green and others blackish. Specific character of the *psittacus collaris*: "It is green, with a reddish throat." Synonymes.---*Psittacus collaris*, *Linn.* and *Gmel.* *Psittacus jamaicensis gutture rubro*, *Briss.* *Psittacus minor collo miniaceo*, *Ray.* Common parrot of Jamaica, *Sloane.* Red-throated parrot, *Lath.*

THE BROWN POPINJAY PARROT.

THIS bird is described, figured, and coloured, by Edwards; it is one of the rarest, and not the least beautiful, in the genus of parrots. It is found in New Spain. It is nearly as large as a common pigeon; the cheeks and the upper side of the neck are greenish; the back is dull brown; the rump is greenish; the tail is green above and blue below; the throat is of a beautiful blue, which is about an inch broad; the breast, belly, and legs, are brown, with a little cinereous; the wings are green, but the quills next the body are edged with yellow; the under coverts of the tail are of a fine red; the bill is black above, its base yellow, and the sides of the two mandibles are of a fine red; the iris is brown nut colour. Specific character of the *psittacus sordidus*: "It is brownish; its throat blue; its wings and tail green; its bill and vent red." Synonymes.---*Psittacus sordidus*, *Linn.* and *Gmel.* *Psittacus novæ hispaniæ*, *Briss.* Dusky parrot, *Edw.* and *Lath.*

AURORA-HEADED POPINJAY PARROT.

DUPRATZ is the only person who has described this bird. "It is not," says he, "so large as the generality of parrots; its plumage is of a beautiful celadine-green; its head is enveloped in orange, which receives a red tinge near the bill, and melts into the green on the side of the body; it learns with difficulty

faculty to speak, and, when it has made that acquisition, it seldom displays it. These parrots always appear in flocks, and, if they are silent when tamed, they are very noisy in the air, and their shrill screams are heard at a distance. They live on walnuts, the kernels of pine-tops, the seeds of the tulip-tree, and other small seeds." Specific character of the *psittacus ludovicianus*: "It is sea-green; its head fulvous, inclining to reddish near the bill." Synonymes.---*Psittacus ludovicianus*, *Gmel.* *Psittacus viridis*, *capite luteo*, *fronte rubra*, *Fris.* Orange-headed parrot, *Latb.*

THE PARAGUA PARROT.

THIS bird, which is described by Marcgrave, appears to be found in Brasil. It is partly black, and larger than the Amazons; the breast and the upper part of the belly, and also the back, are of a very beautiful red; the iris is likewise of a fine red; the bill, the legs, and the feet, are deep ash colour.

The beautiful red colours would indicate a relation to the lory; but as that bird occurs only in India, while the other is probably indigenous in Brasil, we shall not venture to pronounce whether they are of the same, or of different species; especially as Marcgrave, who saw the parrot, only gives it the name *paragua*, without saying it is a native of Brazil. Specific character of the *psittacus paraguanus*: "It is scarlet; its head, its neck, its vent, its tail, its shoulders, and its wings, black." Synonymes.---*Psittacus paraguanus*, *Gmel.* *Lorius brasiliensis*, *Briss.* *Paraguan lory*, *Latb.*

THE MAIPOURI PARROT.

THIS species is found in Guiana, in Mexico, and as far as the Caraccas; it never comes nigh the settlements, but commonly lives in woods surrounded with water, or even among the trees which grow in
the

the deluged savannas. It has no other note than a sharp whistle, which it repeats often while on the wing, and it never learns to speak.

These birds commonly associate in small bodies, but often without any tie of affection; for they fight frequently, and with rancorous obstinacy. When any are caught, they reject every kind of food, so that it is impossible to keep them alive; and their temper is so stubborn that it cannot be softened by any of the methods which are used to calm the most froward of the parrots. The maipouris require to be bred when young, and they would not repay the trouble of educating them, were not their plumage so beautiful, and their figure so singular: for their shape is very different from that of other parrots or parroquets; their body being thicker and shorter, their head much larger, their neck and tail extremely short; so that they have a heavy unwieldy air. All their motions are suitable to their figure; even their feathers are entirely different from those of other parrots and parakeets, being short, close, and cohering to the body; so that they seem compressed and glued artificially on the breast and on all the lower parts of the body.

The upper side of the head is black; there is a green spot below the eyes; the sides of the head, the throat, and the lower part of the neck, are of a fine yellow; the upper side of the neck, the belly, and the legs, are orange; the back, the rump, and the superior coverts of the wings, and the quills of the tail, are of a fine green; the breast and the belly are whitish when the bird is young, and yellowish after it is grown up; the great quills of the wings are exteriorly blue on the upper side, and blackish below; the following ones are green, and edged exteriorly with yellow; the iris is of a deep chefnut; the bill flesh coloured; the feet ash brown, and the nails blackish. Specific character of the *psittacus melanocephalus*: " It is green, below yellow; its cap black; its

its breast white; its orbits carnation." Synonymes. ---*Psittacus melanocephalus*, *Linn.* and *Gmel.* *Psittacus mexicanus pectore albo*, *Briss.* *Psittacus atricapillus*, *Miller.* White-breasted parrot, *Edw.* and *Lath.*

THE CAICA PARROT.

THIS bird is of the same genus with the preceding; for it has all the peculiarities of the form, and also the black hood. Its species is not only new in Europe, but even in Cayenne. M. Sonini de Mononcour tells us, that he saw it the first time in 1773. Prior to that date none ever appeared in Cayenne, and it is still uncertain from what country they come. But they have since continued to arrive annually in small flocks, about the months of September and October, and halt only a short time during the fine weather, so that they are only birds of passage.

The hood which envelopes the caica is pierced with a hole, in which the eye is placed; the hood extends very low, and spreads into two chin pieces of the same colour; the circuit of the neck is fulvous and yellowish; the beautiful green which covers the rest of the body is interrupted by an azure tinge, that marks the edges of the wing from the shoulder, borders the great quills on a darker ground, and tips those of the tail, except the two middle ones, which are entirely green, and appear rather shorter than the lateral ones. Specific character of the *psittacus pileatus*: "It is green; its head black; its orbits white; a sky-blue spot on its shoulders; the tail tipped with blue." Synonymes. ---*Psittacus pileatus*, *Gmel.* Hooded parrot, *Lath.*

PARRAKEETS of the NEW CONTINENT
WITH LONG TAILS.

THE PAVOUANE PARRAKEET.

THIS is one of the handsomest of the parrakeets. It is pretty common in Cayenne, and is also found in the Antilles, as M. de la Borde assures us. It learns more easily to speak than any of the parrakeets of the new continent; but, in other respects, it is indocile, for it always retains its wild savage character. Its aspect is angry and turbulent, but it has a quick eye and a slender active shape, its figure is pleasing. These parrakeets fly in flocks, perpetually screaming and squalling; and they range through the woods and savannas, and prefer the fruit of a large tree, called in that country the *immortal*, and which Tournefort denominates the *corallo dendron*.

It is a foot long; its tail is near six inches, and regularly tapered; the upper side of the wings and tail of a very fine green. In proportion as the bird grows older, the sides of the head and neck are covered with small spots of a bright red, which become more and more numerous; so that, in such as are aged, these parts are almost entirely covered with beautiful red spots. These never begin to appear till the second or third year. The small inferior coverts of the wings are of the same bright red, in every period of its age, only the colour is not quite so bright when the bird is young. The great inferior wings are of a fine yellow; the quills of the wings and tail are of a dull yellow below; the wing is whitish, and the feet are grey. It is remarked that the parrakeets never associate with the parrots, but always keep together in great flocks. Synonymes.---*Pfittacus guianensis*, *Gmel.* and *Briss.* Pavouane parrot, *Lath.*

BROWN.

BROWN-THROATED PARRAKEET.

EDWARDS is the first who described this parakeet. It is found in the new world; Brisson received a specimen from Martinico. The front, the sides of the head, the throat, and the lower part of the neck, are of a brown grey; the crown of the head is bluish green; all the upper part of the body yellowish green; the great superior coverts of the wings blue; all the quills of the wings blackish below, but the primaries are blue above, with a broad blackish border on the under side; the middle ones are of the same green with the upper side of the body; the tail is green above and yellowish below; the iris is chestnut; the bill and feet ash-coloured. Specific character of the *psittacus æruginosis*: "It is green; its top and its primary wing-quills blue; its orbits cinereous." Synonymes.---*Psittacus æruginosis*, Linn. and Gmel. *Psittaca martinicana*, Briss. Brown-throated parakeet, Edw. and Lath.

THE PARRAKEET WITH VARIEGATED THROAT.

THIS parakeet is very rare and handsome. It is nearly as large as a blackbird; the greatest part of its plumage is of a fine green, but the throat and the fore-side of the neck are brown, with scales and mails of rusty grey; the great quills of the wings are tinged with blue; the front is water-green; behind the neck and a little below the back, is a small zone of the same colour; on the fold of the wing are some feathers of a light vivid red; the tail is partly green above and partly dun-red, with copper reflections, and below it is entirely copper coloured; the same tinge appears under the belly.

PARRAKEET WITH VARIEGATED WINGS.

THIS species is called the *common parrakeet* of Cayenne. It is not so large as a blackbird, being only eight inches and four lines long, including the tail, which is three inches and a half. These parrakeets keep in numerous flocks, prefer the cleared grounds, and even resort to the settled spots. They are very fond of the buds of the *immortal* tree, and when in blossom they perch on it in crowds. One of these large trees planted in the town of Cayenne draws the visits of these birds; they are frightened away by firing upon them, but they soon return. It is difficult to teach them to speak.

In this parrakeet the head, the whole body, the tail, and the superior coverts of the wings, are of a fine green; the quills of the wings are variegated with yellow, bluish green, white, and green; the quills of the tail are edged with yellowish on the inside; the bill, the feet, and the nails, are grey. In the female the colours are not so bright, which is the only difference. Barrere confounds this bird with the *anaca* of Marcgrave; but these two birds, though of the same genus, are of different species. Synonymes.---*Pfittacus virescens*, *Gmel.* *Pfittaca cayanaensis*, *Briss.* Yellow-winged parrakeet, *Lath.*

THE ANACA PARRAKEET.

THE *anaca* is a very handsome parrakeet, which is found in Brazil. It is only of the size of a lark; the crown of the head is chestnut; the sides of the head brown; the throat cinereous; the upper side of the neck and the flanks green; the belly is rusty brown; the back green with a brown spot; the tail light brown; the quills of the wings green terminated with blue, and there is a spot or rather a fringe of blood colour on the top of the wings; the bill is brown; the feet cinereous. Specific charac-

ter of the *psittacus anaca*: "It is green, below brown rufous; its top bay; a spot on its back, and its tail pale brown; the margin of its wings red." Synonymes.---*Psittacus ana*, *Gmel.* *Psittacula brasiliensis fusca*, *Briss.* Chesnut crowned parakeet, *Lath.*

THE JENDAYA PARRAKEET.

THIS parakeet is equal in bulk to the black-bird. The back, the wings, the tail, and the rump, are of a bluish green, inclining to that of beryl; the head, the neck, and the breast, are orange yellow; the extremities of the wings blackish; the iris of a fine gold colour; the bill and feet black. It is found in Brazil, and was first described by Marcgrave. Specific character of the *psittacus jandaya*: "Above it is green, below bright yellow; its head and neck bright yellow." Synonymes.---*Psittacus jandaya*, *Linn. Gmel.* *Psittacula brasiliensis lutea*, *Briss.* Yellow-headed parrot, *Lath.*

THE EMERALD PARRAKEET.

THE rich and brilliant green that covers the whole of the body, except the tail, which is chesnut with a green point, seems to entitle this bird to the name of *emerald parakeet*. Specific character of the *psittacus smaragdinus*: "It is brilliant green; the hind part of its belly, its rump, and its tail, ferruginous chesnut." Synonymes.---*Psittacus smaragdinus*, *Gmel.* Emerald parrot, *Lath.*

THE SINCIALO PARRAKEET.

THIS bird is called *sincialo* at St. Domingo. It is not larger than a black-bird, but is twice as long, its tail being seven inches, and its body five. It is disposed to chatter, and easily learns to speak, to whistle, and to mimic the cries of all the animals which it hears; these parakeets fly in flocks, and perch on
the

the closest and most verdant trees; and, as they are green themselves, they can hardly be perceived. They make a great noise among the trees, many at once screaming, squalling, and chattering; and, if they hear the voice of men or other animals, they cry the louder. This habit is not peculiar to the fyncialos, for almost all parrots that are kept in the house babble with more vociferation when a person speaks high. They feed like the other parrots, but are more lively and cheerful: they are soon tamed; they seem fond of being taken notice of, and they seldom are silent, for whenever a person talks, they scream and chatter likewise. They grow fat and delicate to eat, during the maturity of the seeds of Indian wood, which principally supports them.

The whole plumage of this parrakeet is yellowish green; the inferior coverts of its wings and tail are almost yellow; the two quills in the middle of the tail are longer, by an inch and nine lines, than those contiguous on either side, and the other lateral quills contract gradually, so that the outermost are five inches shorter than the mid ones. The eyes are encircled by a flesh-coloured skin; the iris is fine orange; the bill is black, with a little red at the base of the upper mandible; the feet and nails are flesh-coloured. This species is scattered through all the warm parts of America. Specific character of the *psittacus rufirostris*: "It is green; its bill and feet are red; its tail-quills tipped with bluish; its orbits carnation." Synonymes. --- *Psittacus rufirostris*, Linn. Gmel. and Gerini. Long-tailed green parrakeet, Edw. and Latb.

THE RED-BREASTED PARRAKEET.

THIS bird is found, like the preceding, in almost all the warm parts of America. It was first described by Edwards. The front is of a bright red; the crown of the head of a fine blue; the back of the head, the upper side of the neck, the superior coverts of



The Red-breasted Parrakeet.

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of the wings and those of the tail, are deep green; the throat and all the under side of the body are a little yellowish; some of the great coverts of the wings are blue; the primaries are dull ash-colour on the inside, and blue on the outside and at the extremity; the iris is orange; the bill cinereous. It is one of the most beautiful species of this genus of birds throughout the continent of America. Specific character of the *psittacus canicularis*: "It is green, with a red front; the back of its head and the outermost quills of its wings, are blue; its orbits fulvous." Synonymes.---*Psittacus canicularis*, Linn. and Gmel. *Psittacus brasiliensis fronte rubro*, Briss. Red and blue-headed parakeet, Edw. and Latb.

THE YELLOW-FACED PARRAKEET.

THE front, the sides of the head, and the top of the throat, are of a fine yellow; the crown and back of the head, the upper surface of the neck and of the body, the wings and the tail, are of a fine green. Some of the superior coverts of the wings, and the great quills, are edged exteriorly with blue; the two quills in the middle of the tail are longer than the lateral ones, which continually shorten, insomuch that the mid-ones exceed the outermost by an inch and nine lines; the lower belly is yellow; the iris deep orange; the bill and feet cinereous.

From this description it is manifest that this species is not the same with the preceding, and is even widely different. Besides, it is very common in Guiana, where the former is never found. It is vulgarly called at Cayenne the *wood-lice parakeet*, because it generally lodges in the holes where these insects nestle. It remains the whole year in Guiana, and frequents the savannas and cleared lands. It is very improbable that this species extends to the country of the Illinois, or roams so far north, as Brisson asserts; especially as no species of parrot is found beyond Carolina, and
only

only one species in Louisiana. Specific character of the *psittacus pertinax*: "It is green; its cheeks fulvous; the quills of its wings and tail somewhat hoary." Synonymes.---*Psittacus pertinax*, Linn. Gmel. and Bor. *Psittaca illiniaca*, Briss. *Psittacus viridis malis croceis*, Klein. Yellow-faced parrot, Edw. Illinois parrot, Penn. and Lath.

THE GOLDEN-CROWNED PARRAKEET.

THIS name was bestowed by Edwards, who took the bird for a female of the preceding species. What he described was really a female, since it laid five or six small white eggs, and lived fourteen years in England. But the species is different from the foregoing; for, though both are common in Cayenne, they never associate together, but keep in separate flocks; and the males resemble the females. The golden-crowned parrakeet is called in Guiana the *parrakeet of the savannas*; it speaks extremely well, and is very intelligent; whereas the preceding is not esteemed, and articulates with difficulty.

This handsome parrakeet has a large orange spot on the fore part of the head; the rest of the head, all the upper side of the body, the wings, and the tail, are of a deep green; the throat and the lower part of the neck are of a yellowish green, with a slight tinge of dull red; the rest of the under side of the body is pale green; some of the great superior coverts of the wings are edged exteriorly with blue; the outer side of the feathers of the middle of the wings is also of a fine blue, which forms on each wing a broad longitudinal band of that beautiful colour; the iris is vivid orange; the bill and feet blackish. Specific character of the *psittacus aureus*: "It is green; its cere and its orbits bluish carnation; its top golden; an oblique blue stripe on the coverts of its wings." Synonymes.---*Psittacus aureus*, Linn. and Gmel. *Psittacus brasiliensis*, Briss.

THE

THE GUAROUBA or YELLOW PARRAKEET

MARCGRAVE and De Laët are the first who take notice of this bird, which is found in Brazil, and sometimes in the country of the Amazons, where however it is rare, nor is it ever seen near Cayenne. This parakeet, which the Brazilians call *guaruba*, that is, yellow bird, does not learn to speak, but is melancholy and solitary. Yet the savages hold it in great estimation for the sake of its plumage, which is very different from that of the other parrots, and on account of its being easily tamed. It is almost entirely yellow; only there are some green spots on the wings, whose small quills are green, fringed with yellow; the primaries are violet fringed with blue; and the same mixture of colours appears on the tail, whose extremity is blue-violet; its middle and rump are green, edged with yellow; all the rest of the body is pure yellow, and vivid saffron, or orange. The tail is five inches in length, which is that of the body; it is much tapered, so that the last lateral feathers are one half shorter than those of the middle. The yellow Mexican parakeet, given by Brisson from Seba, appears to be a variety of this; and the little pale red which Seba represents on the head of his bird *cocho*, and which was perhaps only an orange tint, does not form a specific character. The rarest of the parrots are those which are entirely yellow, with a little green at the extremity of the wings. Synonymes---*Pittacus-guarouba*, Linn. and Gmel. *Pittaca brasiliensis lutea*, Briss. *Quijuba tui*, Marc, Ray, &c. Brazilian yellow parrot, Lath.

THE YELLOW-HEADED PARRAKEET.

THIS parakeet appears to be one of those which travel from Guiana to Carolina, to Louisiana, and even to Virginia. The front is of a beautiful orange; all the rest of the head, the throat, and half of the

neck, and the fan of the wing, are of a fine yellow; the rest of the body, and the superior coverts of the wings, are light green; the great quills of the wings are brown on the inner side; the outer side is yellow, as far as one third of its length, it then grows green and blue near the extremity; the middle quills of the wings, and those of the tail, are green; the two middle ones of the tail are an inch and a half longer than those adjacent on either side; the iris is yellow; the bill is yellowish white; and the feet are grey.

These birds, says Catesby, feed upon the seeds and kernels of fruits, particularly apples, and the grains contained in cypress cones. In autumn they resort to the orchards in great flocks, and as they tear and mangle fruits to obtain the kernel, which is the only part that they eat, they do much injury. They penetrate as far as Virginia, and are the only species found in Carolina, where a few breed; but most of them retire southwards in the love season, and appear again during the harvest; being enticed by the fruit-trees, and rice-crops. The colonies between the tropics suffer greatly from the influx of parrots on their plantations. In the months of August and September of 1750 and 1751, a prodigious number of parrots of all kinds arrived in Surinam, and spread in flocks among the ripe coffee; they ate the red husks, without touching the beans, which they suffered to fall to the ground. In 1760, about the same season, new swarms of these birds appeared, and, extending along the coast, did much injury, though it could not be conjectured whence they came. In general, the ripeness of fruits, the plenty or scarcity of food in different countries, compel certain species of parrots to *flit* from one tract to another. Specific character of the *psittacus carolinensis*: "It is green; its head, its neck, and its knees, yellow." Synonymes.---*Psittacus carolinensis*, Linn. and Gmel. *Psittaca carolinensis*, Briss. Carolina parrot, Catesby, Penn. and Lath.

THE ARA PARRAKEET.

BARRERE is the first who has noticed this bird. It is however frequently seen in Cayenne, where it is reckoned migratory. It haunts the overflowed savannas, like the macaws, and also subsists on the fruits of the palmetto. It is called the *ara parrakeet*, because it is larger than the other parrakeets; its tail is very long, being nine inches, and its body the same; like the aras also, it has a naked skin from the corners of the bill to the eyes, and pronounces distinctly the word *ara*, though with a raucous voice, and lower and shriller. The natives at Cayenne call it *makavouanne*.

The quills of the tail are unequally tapered; all the upper side of the body, of the wings, and of the tail, deep green, with a dark cast, except the great quills of the wings, which are blue, edged with green, and terminated with brown on the outside; the upper part and the side of the head are green mixed with deep blue, so as, in certain positions, to appear entirely blue; the throat, the lower part of the neck, and the top of the breast, have a deep rusty cast; the rest of the breast, the belly, and the sides of the body, are of a paler green than that of the back; lastly, on the lower belly there is some brown-red, which extends over some of the lower coverts of the tail; the quills of the wings and of the tail are yellowish-green below. Synonymes.---*Pittacus-makawanna*, *Gmel.* Parrot maccaw, *Lath.*

TOUIS, OR SHORT-TAILED PARRAKEETS.

THESE are the smallest of all the parrots which inhabit the new continent: their tail is short, and their bulk exceeds not that of the sparrow; and most of them are incapable of being taught to speak; for, of the species with which we are yet acquainted, there are only two which can acquire that talent. The

Touis appear to be found in both continents, and, though not exactly of the same species, they are analogous and related. We are inclined to think that they are all originally natives of Brazil, whence they have been introduced into Guinea and the Phillipine islands.

THE YELLOW-THROATED TOUI PARAKEET.

THE head and all the upper side of the body are of a fine green; the throat is of a fine orange colour; all the under side of the body yellowish green; the superior coverts of the wings are variegated with green, brown, and yellowish; the inferior coverts are fine yellow; the quills of the wings are variegated with green, yellowish, and deep cinereous; those of the tail are green and edged internally with yellowish; the bill, the feet, and the nails, are grey. Specific character of the *psittacus tovi*: "It is green; a pale orange spot on the throat; a broad chefnut bar on its wings, with a green gold lustre." Synonymes,--- *Psittacus-tovi*, *Gmel.* *Psittacula gutture luteo*, *Briss.* Yellow-throated parrakeet, *Lath.*

THE SOSOVE TOUI PARRAKEET.

SOSOVE is the Galibi name of this charming little bird, which is easily described, since it is entirely of a brilliant green, except a spot of light yellow on the quills of the wings, and on the superior coverts of the tail; the bill is white, and the feet grey.

This species is common in Guiana, especially near Oyapoe, and the river Amazons. It can easily be tamed, and taught to speak. When well trained, it is extremely entertaining. Specific character of the *psittacus sosove*: "It is green, with a dilute yellow spot on its wings and the covert of its tail." Synonymes,--- *Psittacus-sosove*, *Gmel.* Cayenne parrakeet, *Lath.*

THE TIRICA PARRAKEET.

MARCGRAVE first described this bird. Its plumage is entirely green; the eyes are black; the bill carnation; and the feet bluish. It is soon tamed and taught to speak, and is very gentle, and easily managed.

Sonnerat mentions a bird which he saw in the island of Luçon, and which much resembles the *tuitirica* of Marcgrave. It is of the same bulk, and its plumage wholly green, though deeper above, and lighter below. But it is distinguished by the grey colour of its bill, which is carnation in the other, and by the grey cast of its feet, which are bluish in the former: these differences would be insufficient to constitute a species, if the climates were not so distant. It is possible and even probable, that this bird was carried from America to the Philippines, where it might undergo some small changes. Specific character of the *psittacus tirica*: "It is green; the bill carnation; its feet and nails bluish." Synonymes.---*Psittacus-tirica*, *Gmel.* *Psittacula brasiliensis*, *Briss.* Green-parrakeet, *Lath.*

THE ETE, OR TOUI-ETE PARRAKEET.

WE are likewise indebted to Marcgrave for the account of this bird. It is found in Brazil; its plumage is in general light green; but the rump, and the top of the wings, are of a fine blue; all the quills of the wings are edged with blue on the outside, which forms a long blue band when the wings are closed; the bill is flesh-coloured, and the feet cinereous. Specific character of the *psittacus passerinus*: "It is yellow-greenish; a spot on its wings, and their under surface, blue." Synonymes.---*Psittacus passerinus*, *Linn. Gmel.* and *Bor.* *Psittaca brasiliensis uropygio cyano*, *Briss.* Tuite, Ray and Will. Short-

Short-tailed green parrakeet, *Bancroft*. Least blue and green parrakeet, *Edw. and Lath.*

GOLDEN-HEADED TOUI PARRAKEET.

THIS bird is also found in Brazil. All its plumage is green, except the head, which is of a fine yellow; and, as its tail is very short, we must not confound it with another parrakeet which is also of a gold colour, but, at the same time, a long-tail. Specific character of the *psittacus-tui*: "It is green; its front orange; its orbits bright yellow." Synonymes. — *Psittacus-tui*, *Gmel.* *Psittacula brasiliensis icterocephalos*, *Briss.* Gold-headed parrakeet, *Lath.*

The newly-discovered subjects in this genus are as follow: The obscure parrot, *psittacus obscurus*; from America. Noble parrot, *psittacus nobilis*: it is long-tailed and green; its cheeks naked; its shoulders scarlet: it inhabits Surinam, and is of the size of the turtle. Javan parrakeet, *psittacus javanicus*: it is long-tailed and green; its head variegated with blue and bright yellow; its temples black; its throat and breast red; a bright yellow spot on its coverts. Tabuan parrot, *psittacus tabuensis*; from Tongataboo. Beautiful lory, *psittacus elegans*: it is long-tailed and brown; its feathers edged with red and green; its head, its neck, and the under side of its body, scarlet; its shoulders, and the margins of its quills, edged with blue: it inhabits the Moluccas. Variegated lory, *psittacus variegatus*; from India. Pennantian parrot, *psittacus pennantii*: it is long-tailed and scarlet; the fore part of its back black, waved with scarlet; the sides of the body, and the throat, blue; a white spot on the inside of the wing-quills: it is found in New South Wales. Black lory, *psittacus Novæ Guineæ*. Crimson-vented parrot, *psittacus erythropigijs*; from Asia. Chilian parrot, *psittacus jaguilma*: it is long-tailed and green; its wing-quills tipped with brown, its orbits fulvous: it lives in numerous

merous flocks during summer on the Cordilleras, and crops herbs and the buds of trees. Varied-winged parrot, *psittacus marginatus*; from the isle of Luçon. Scaly-breasted parrakeet, *psittacus squamosus*; from Cayenne. Horned parrot, *psittacus bisetis*; from New Caledonia. Caledonian parrot, *psittacus caledonicus*. Red-rumped parrot, *psittacus zealandicus*; from New Zealand. Crested parrakeet, *psittacus Novæ Hollandiæ*; from New Holland. Society parrot, *psittacus Ulietanus*; from Ulietea. White-collared parrot, *psittacus multicolor*; from India. Lineated parrot, *psittacus lineatus*. Pacific parrot, *psittacus pacificus*; from Otaheite. Peregrine parrot, *psittacus peregrinus*; from the islands in the South Sea. Palm parrot, *psittacus palmarum*; from the island of Tanna. Blue-crested parrakeet, *psittacus pipilans*; from the Sandwich islands: it is of the size of a lark, and beautiful; it has a piping voice. New South Wales parakeet, *psittacus pusillus*. Pygmy parrakeet, *psittacus pygmaeus*; from the islands in the South Sea. Crowned cockatoo, *psittacus coronatus*; from Guiana. Bankian cockatoo, *psittacus Banksii*; from New Holland. New South Wales cockatoo, *psittacus galeritus*. Southern brown parrot, *psittacus meridionalis*; from New Holland. South American parrot, *psittacus fringillaceus*. Robust parrot, *psittacus robustus*. Cochin-china parrot, *psittacus cochinchinensis*. Yellow-breasted lory, *psittacus guineensis*; from Guinea. Grisled parrot, *psittacus nasutus*; from China. White-crowned parrot, *psittacus albifrons*. New Guinea green parrot, *psittacus viridis*. Eastern parrot, *psittacus orientalis*; from India. Blue-cheeked parrot, *psittacus adscitus*. Amber parrot, *psittacus batavensis*; from Batavia. Crimson-winged parrot, *psittacus erythropterus*; from New South Wales. Purple-tailed parrakeet, *psittacus purpuratus*; from Cayenne.

RAMPHASTOS,

RAMPHASTOS, THE TOUCAN.

THIS singular genus of birds contains the toucans and motmots, distributed into sixteen species. Its distinguishing characters are these: bill exceeding large, hollow, convex, serrated outwards, and both mandibles curved at the tip; nostrils behind the base of the bill, long and narrow; tongue long and feathery; feet, in most of the species, scanfory.

The word *toucan* means *feather* in the language of Brazil; and *toucan tabouracé*, which signifies *feathers for dancing*, is applied by the natives to that bird, which furnishes them with the decorations worn on certain festivals. Indeed these birds, though monstrous in their bill, have a brilliant plumage; their throat is orange of the most vivid hue; and, though these beautiful feathers are found only in some species of toucans, yet have they given name to the whole genus. These feathers, even in Europe, have been in great request for making muffs. The huge bill of the toucan has acquired it other honours, and given it a place among the southern constellations. From the excessive length of its bill, Lery has termed it, *the bill of bills*; other voyagers have named the toucan the *bird all-bill*, and the Creoles of Cayenne apply to it the epithet of *grosbeak*. The magnitude of the bill would exceedingly fatigue the head and neck, were it not very thin, insomuch that it may easily be crushed between the fingers. Authors were therefore mistaken in asserting, that the toucans bored trees, like the woodpeckers; or they were at least misled by the Spaniards, who have confounded these birds under the same name *carpenteros* (carpenter), or *tacatacas* in the language of Peru. But it is certain that the toucans are very different from the woodpeckers, and could not imitate them in that habit; and indeed Scaliger has before us remarked that, as their bill was
hooked

hooked downwards, it seemed impossible for them to make a perforation.

The toucans are the only birds which may be said to have a feather instead of a tongue; and a feather it certainly is, for on both sides there are very close barbs, entirely like those of ordinary feathers, and which are longer the nearer they are inserted to the extremity. With an organ so singular and so different from the ordinary substance and organization of the tongue, we might suppose these birds were mute; yet they have a voice, and often utter a sort of whistling, which is reiterated so quickly, and with such continuance, that they have been denominated the *preaching birds*. The savages ascribe great virtues to this feathery tongue, and use it as a cure in many disorders. Some authors have supposed that the toucans had no nostrils; but we may see them by stroking aside the feathers at the base of the bill, which in most species conceal them; in others, they are bare, and consequently very apparent. The toucans have nothing in common with the woodpeckers, but the disposition of their toes, two placed before and two behind. Even in this character, a distinction may be perceived; the toes are much longer and differently proportioned than in woodpeckers; the outer fore toe is almost as long as the whole foot, which is indeed very short, and the other toes are also very long, the two inner ones are the least so. The feet of the toucans are only half the length of the legs, so that they cannot walk, but hop, and that awkwardly: the feet are not feathered, but covered with long soft scales. The nails are proportioned to the length of the toes, arched, and somewhat flattened, obtuse at the end, and furrowed below lengthwise by a channel; they are of no service to the bird in attack or defence, or even for climbing, but only to support it firmly on the boughs on which it perches.

The toucans are scattered through all the warm
Vol. IV. No. 58, O O parts

parts of South America, and never occur in the ancient continent. They flit rather than migrate, following the maturity of the fruits on which they feed, particularly those of the palms; and as these trees delight in wet places near the margin of water, the toucans affect such situations, and sometimes they even lodge on the mangroves, which grow in deluged mud. And hence it has been supposed that they eat fishes, but these must at least be very small, since they are obliged to swallow their food entire. These birds generally go in small bodies from six to ten; their flight is heavy and laborious, owing to the shortness of their wings and the weight of their enormous bill; yet they rise above the tallest trees, on the summits of which they are almost always perched, and in continual flutter; but the vivacity of their motions dispels not their dull air, for the huge bill gives them a serious melancholy countenance, and their large dull eyes augment the effect: in short, though lively and active, they appear heavy and awkward.

As they breed in the holes abandoned by the woodpeckers, it has from hence been supposed that they excavate these themselves. They lay only two eggs, yet all the species contain abundance of individuals. They may be easily tamed, if taken young; it is even said that they will propagate in the domestic state. They are not difficult to rear, for they swallow whatever is thrown to them, bread, flesh, or fish; they also, with the point of their bill, lay hold of the bits that are held near them; they toss these up, and catch them in their throat. But when they are obliged to provide for themselves, and to gather their food from the ground, they seem to grope, and seize the crumb sidewise, that it may leap up, and be caught in its fall. They are so delicate to impressions of cold, as to be affected by the coolness of evening in the hottest climates, even of the new continent; they have been observed in the house to make a bed of
herbs,

herbs, of straw, and of whatever they could gather. Their skin is in general blue under the feathers, and their flesh, though black and hard, is very palatable.

THE DICOLORIS, OR YELLOW-THROATED TOUCAN.

THIS bird is about the size of a jackdaw, with a large head to support its monstrous bill: this bill, from the angles of the mouth to its point, is six inches and a half; and its breadth in the thickest part is a little more than two. Its thickness near the head is one inch and a quarter; and it is a little rounded along the top of the upper chap, the under side being round also; the whole of the bill extremely slight, and a little thicker than parchment. The upper chap is of a bright yellow, except on each side, which is of a fine scarlet colour; as is also the lower chap, except at the base, which is purple. Between the head and the bill there is a black line of separation all round the base of the bill; in the upper part of which the nostrils are placed. Round the eyes, on each side of the head, is a space of bluish skin, void of feathers; above which the head is black, except a white spot on each side joining to the base of the upper chap. The hinder part of the neck, the back, wings, tail, belly, and thighs, are black. The under side of the head, throat, and the beginning of the breast, are yellow. Between the breast, and the black on the belly, is a space of red feathers, in the form of a new moon, with its horns upwards. The legs, feet, and claws, are of an ash-colour; and the toes stand like those of parrots, two before and two behind.

This bird, though furnished with so formidable a beak, is harmless and gentle. It feeds chiefly upon pepper, which it devours very greedily, gorging itself in such a manner that it voids it crude and uncooked. This, however, is no objection to the natives from using it again: they even prefer it before
 O o 2 that

that pepper which is fresh gathered from the tree; and seem persuaded that the strength and heat of the pepper is qualified by the bird, and that all its noxious qualities are thus exhausted. Whatever be the truth of this report, nothing is more certain than that the toucan lives upon a vegetable diet; and, in a domestic state, to which it is frequently brought in the warm countries where it is bred, it is seen to prefer such food to all other. Pozzo, who bred one tame, asserts, that it leaped up and down, wagged its tail, and cried with a voice resembling that of a magpie. It fed upon the same things that parrots do; but was most greedy of grapes, which, being plucked off one by one, and thrown in the air, it would most dexterously catch before they fell to the ground. Its bill, he adds, was hollow, and upon that account very light, so that it had but little strength in so apparently formidable a weapon; nor could it peck or strike smartly therewith. But its tongue seemed to assist the efforts of this unwieldy machine: it was long, thin, and flat, not unlike one of the feathers on the neck of a dung-hill cock; this it moved up and down, and often extended five or six inches from the bill. It was of a flesh colour, and remarkably fringed on each side with very small filaments, exactly resembling a feather. It is probable that this long tongue has greater strength than the thin hollow beak that contains it. It is likely the beak is only a kind of sheath for this peculiar instrument, used by the toucan, not only in making itself a nest, but also in obtaining its provision; for from the thinness of its texture naturalists do not consider its bill as at all adapted for a weapon of defence. But be this as it will, there is no bird secures its young better from external injury than the toucan. It has not only birds, men, and serpents, to guard against; but a numerous tribe of monkeys, still more prying, mischievous, and hungry, than all the rest. The toucan, however, builds its nest in the hollow of some tree,

tree, leaving only a hole large enough to go in and out. There it sits, with its great beak, guarding the entrance; and, if the monkey ventures to offer a visit of curiosity, the toucan gives him such a welcome, that he presently thinks proper to pack off, and is glad to escape with safety. Specific character given by Linnæus: "It is blackish; its breast, its belly, its vent, and its rump, red; its throat yellow." Synonymes.---*Ramphastos dicolorus*, *Linn*, and *Gmel*.

THE TUCANA, OR BRASILIAN TOUCAN.

THE difference between this and the former species consists in the colour of their bill, and in the extent of the yellow plate on the throat, as well as in the vivacity of their colours. The head and upper side of the body, the wings, and the tail, are black; the throat orange, more or less bright; under the throat, a red bar of various width stretches on the breast; the belly is blackish, and the inferior coverts of the tail are red; the bill is black with a blue stripe running from its top all its length: the base of the bill is surrounded by a pretty broad yellow or white bar; the nostrils are concealed in the feathers at the root, and their apertures are round; the legs are bluish; the bill, four inches and a half long; the whole bird, from the end of the bill to the extremity of the tail, is nineteen inches; but if from this we deduct six inches and two or three lines for the tail, and four inches and a half for the bill, there remains hardly nine inches for the length of the head and body. Specific character of the *ramphastos tucanus*. "It is blackish; a bar on its belly, its vent and rump yellow." Synonymes.---*Ramphastos tucanus*, *Linn*, and *Gmel*. *Tucana Brasiliensis*, gutture luteo, *Briss*.

THE PICATUS, OR RED-BELLIED TOUCAN.

THE head, neck, back, and wings, are black, with whitish reflections; the breast is of a fine gold colour,

colour, with red above it, that is, under the throat; the belly, too, and the legs, are of a very bright red, and likewise the extremity of the tail, the rest of which is black; the iris is black, surrounded by a white circle, which itself is inclosed within another yellow circle; the lower mandible is only half as large near the extremity as the corresponding part of the upper mandible; both are indented on the edges. Specific character of the *ramphastos picatus*: "It is blackish; its breast yellow; its vent, and the tips of its tail-quills red; its rump black." Synonymes.--- *Ramphastos picatus*, Linn. and Gmel. *Taucana*, Briss. *Nasutus simpliciter*, Klein. *Brasilian pye*, or *toucan*, Alb. and Will. *Preacher toucan*, Lath.

TORQUATUS, OR COLLARED TOUCAN.

THIS is nearly of the same bulk with the other toucans; its bill is seven inches long, the upper mandible white and indented, and the lower black; the eyes are black, and the iris reddish yellow; the head and neck black, as far as a cross red line which encircles it like a collar, after which the upper side of the neck continues black, and the under side whitish, sprinkled with red spots and small black lines; the tail and wings are also black; the belly is green; the legs red; the feet of a greenish ash colour, and the nails black. It frequents the sea-shore, and lives on fish. Specific character of the *psittacus torquatus*: "Above it is black, below whitish, its belly green, its hind part red, its collar red." Synonymes.--- *Psittacus torquatus*, Gmel. *Ramphastos torquatus*, Lath. Ind. *Tucana Mexicana torquata*, Briss. *Collared toucan*, Lath. Syn.

THE PAVONINE TOUCAN.

THIS is of the size and shape of a parrot; its plumage is almost entirely green, only sprinkled with some red spots; the legs and feet are black and short;
the

the bill is four inches long ; it is variegated with yellow and black. This bird inhabits the sea-coast in the hottest parts of Mexico. Specific character of the *ramphastos pavoninus* : " It is green, sprinkled with red and iris feathers." Synonymes.---*Ramphastos pavoninus*, *Gmel.* *Tucana Mexicana viridis*, *Briss.* Pavonine toucan, *Latb.*

THE ARACARI TOUCAN.

THIS bird is found in Brasil, and is very common in Guiana, where it is called gri-gri, because that word expresses its shrill short cry. It has the same natural habits as the other toucans ; it also inhabits the swamps, and lodges among the palms. Specific character of the *ramphastos aracari* : " It is green ; the bar on its belly, the vent, and the rump, are red ; its belly bright yellow." Synonymes.---*Ramphastos aracari*, *Linn.* and *Gmel.* *Tucana Brasiliensis viridis*, *Briss.* and *Gerini.* Aracari toucan, *Latb.*

THE GREEN TOUCAN.

THE head, the throat, and the neck, are black ; the back, the wings, and the tail, are dull green ; the rump red ; the breast and belly yellow ; the inferior coverts of the tail, and the feathers of the legs, olive yellow, variegated with red and fulvous ; the eyes large, and the iris yellow ; the bill is four inches and a quarter long, sixteen lines high, and of a more solid and harder texture than the bill of the other toucans ; the tongue is of the same feathery nature ; the feet, blackish green, very short, and the toes very long : the whole length of the bird, including the bill and the tail, is sixteen inches.

The female differs from the male only in the colour of the throat and of the under side of the neck, which is brown, but black in the male, which usually has its bill black and white, whereas in the female the lower mandible is black, and the upper one yellow,

296 NATURAL HISTORY

low, with a longitudinal bar resembling a long narrow feather. Specific character of the *ramphastos viridis*: "It is green, its belly bright yellow, its rump red." Synonymes.---*Ramphastos viridis*, Linn. and Gmel. *Tucana Cayanensis viridis*, Briss. Green toucan, Lath.

THE PIPERINE TOUCAN.

THIS is rather smaller than the preceding, and its bill shorter in proportion; the head, the throat, the neck, and the breast, are black; on the upper side of the neck, there is a yellow narrow half collar; there is a spot of the same colour on each side of the head, behind the eyes; the back, the rump, and the wings, are of a fine green, and the belly, which is also green, is variegated with blackish; the inferior coverts of the tail are reddish, but the tail itself is green, terminated with red; the feet are blackish; the bill is red at the base, and black through the rest; the eyes are encircled by a naked bluish membrane. The female is distinguished from the male by the colour of the top of the neck, where the plumage is brown, but black in the male; the under side of the body, from the throat to the lower part of the belly, is grey in the female, and the half-collar is of a very pale yellow, whereas it is of a fine yellow in the male, and the under side variegated with different colours. Specific character of the *ramphastos piperivorus*: "It is green, its fore side black, its vent and thighs red." Synonymes.---*Ramphastos piperivorus*, Linn. and Gmel. *Tucana Cayanensis torquata*, Briss. Green toucan, Edw. Piperine toucan, Lath.

THE BLACK-BILLED TOUCAN.

WE have our account of this bird from Nieremberg. It is as large as a pigeon; its bill is thick, black, and hooked; its eyes, too, are black, but the iris is yellow; its wings and tail are variegated with black

black and white; a black bar rises from the bill, and extends on each side to the breast; the top of the wings is yellow, and the rest of the body yellowish white; the legs and feet are brown, and the nails whitish. Synonymes.---*Ramphastos luteus*, *Gmel.* *Tucana lutea*, *Briss.* Black-billed toucan, *Lath.*

THE BLUE TOUCAN.

THIS is of the size of a common pigeon; its bill is very large and indented, yellow above and reddish-black below; all its plumage is variegated with cinereous and blue. It appears that some of these species are birds of passage in certain parts of South America. Synonymes.---*Ramphastos cæruleus*, *Gmel.* *Tucana cærulea*, *Briss.* Blue toucan, *Lath.*

TOCO, OR WHITE-BREADED TOUCAN.

THE body of this bird is nine inches long, including the head and tail; its bill is seven inches and a half; the head, the upper side of the neck, the back, the rump, the wings, the whole tail, the breast, and the belly, are deep black; the coverts of the upper side of the tail are white, and those of the under side are fine red; the under side of the neck and throat are white, mixed with a little yellow: between this yellow, below the throat and the black of the breast, there is a small red circle; the base of the two mandibles is black; the rest of the lower mandible is reddish yellow; the upper mandible is of the same reddish yellow colour, as far as two thirds of its length; the rest of this mandible is black to the point: the wings are short, and reach hardly the third of the tail; the feet and nails are black. Specific character of the *ramphastos-toco*: "It is blackish; its throat and rump white; its orbits, a circle on its breast, and its vent, red." Synonyme.---*Ramphastos-toco*, *Gmel.*

THE MOTMOT.

OF this species there are only two varieties. The first is of a bright green, above; below, of a more obscure shade of the same colour: it is about the size of a pie, being about seventeen inches from the top of the bill to that of the tail. The bill is of a conic shape, bent a little downwards, and serrated upon the edges of both mandibles. The toes are three before, and one behind; the fore toes closely united almost the whole length. The other species is more variegated in its colours: both are distinguished from all other birds, by having the two middle feathers of the tail quite naked of their vanes, for about an inch, at a small distance from their extremity. Some have imagined that this nakedness of the feathers of the tail of this bird, was not the production of nature, but was owing to the caprice of the animal in tearing away the vanes from that part of the stalk which is seen bare. In the young of this genus, however, naturalists observed that the vanes of these feathers were quite entire, and that, as they advanced to their adult state, they gradually grew shorter and shorter, till at last, in old age, they altogether disappeared.

These birds inhabit South America: they are very difficult to tame, because they live upon insects, which cannot easily be procured suitable to their taste. They are extremely shy and timid, when old; and, if then in captivity, invariably refuse all kinds of food. From their solitary habits, they never go in flocks, or even in pairs; and are hardly ever seen but in the midst of large forests, where they hop among the lower branches, or upon the ground. They are almost altogether incapable of flight, and therefore generally build their nests upon the ground, in the deserted holes of some of the smaller quadrupeds. The nest consists of a few withered blades of grass, on which they deposit their eggs to the number of two. The figure in the
annexed



Ward delin.

The Motmot.

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J. Pab. Sculp.



annexed plate was taken from a living bird brought from Brazil. The nostrils are covered with small black feathers, and some black bristles pointing forwards round the upper mandible. The upper part and sides of the bill are encompassed with black, from which run black lines through the eyes, and broader black lists, mixed with a little blue, from the corners of the mouth down the sides of the neck. The top of the head is of an ultramarine blue, though next the bill inclining to sea-green; in the middle of this blue space, on the crown of the head, is a black spot. It hath a spot of black feathers, edged with blue, on the fore part of the neck, a little below the throat; otherwise the whole under side, from the bill to the covert feathers beneath the tail, is of an olive or greenish buff colour. Marcgrave says the eyes are yellowish. On the neck behind is a crescent-like mark of a reddish colour. The sides of the head, hinder part of the neck, back, rump, and covert-feathers of the wings, are of a parrot-green colour. The greater quills are blue with dusky tips; a few of the first row of coverts above them are also blue; a few of the quills next the tail are green. The coverts within-side the wings are of a yellowish brown; the inside of the quills dark ash-colour. The tail-feathers are of a fine blue colour, gradually changing to green at their bottoms, having all of them black tips: the under side of the tail is of a dark dusky colour. Specific character of the *Ramphastos-momota*: "Its feet are gressory (i. e. the toes disposed three before and one behind.)" Synonymes.---*Ramphastos-momota*, *Linn. Gmel.* and *Bor.* *Momotus Brasiliensis*, *Latb. Ind.* *Motmot & yayauhquitotl*, *Fernandez.* *Motmot & avis caudata*, *Nieremberg.* *Guiraguainumbi Brasiliensibus*, *Johnst.* *Ispidæ, seu meropis affinis*, *Ray* and *Will.* *Brasilian saw-billed roller*, *Edw.* *Brasilian motmot*, *Latb. Syn.*

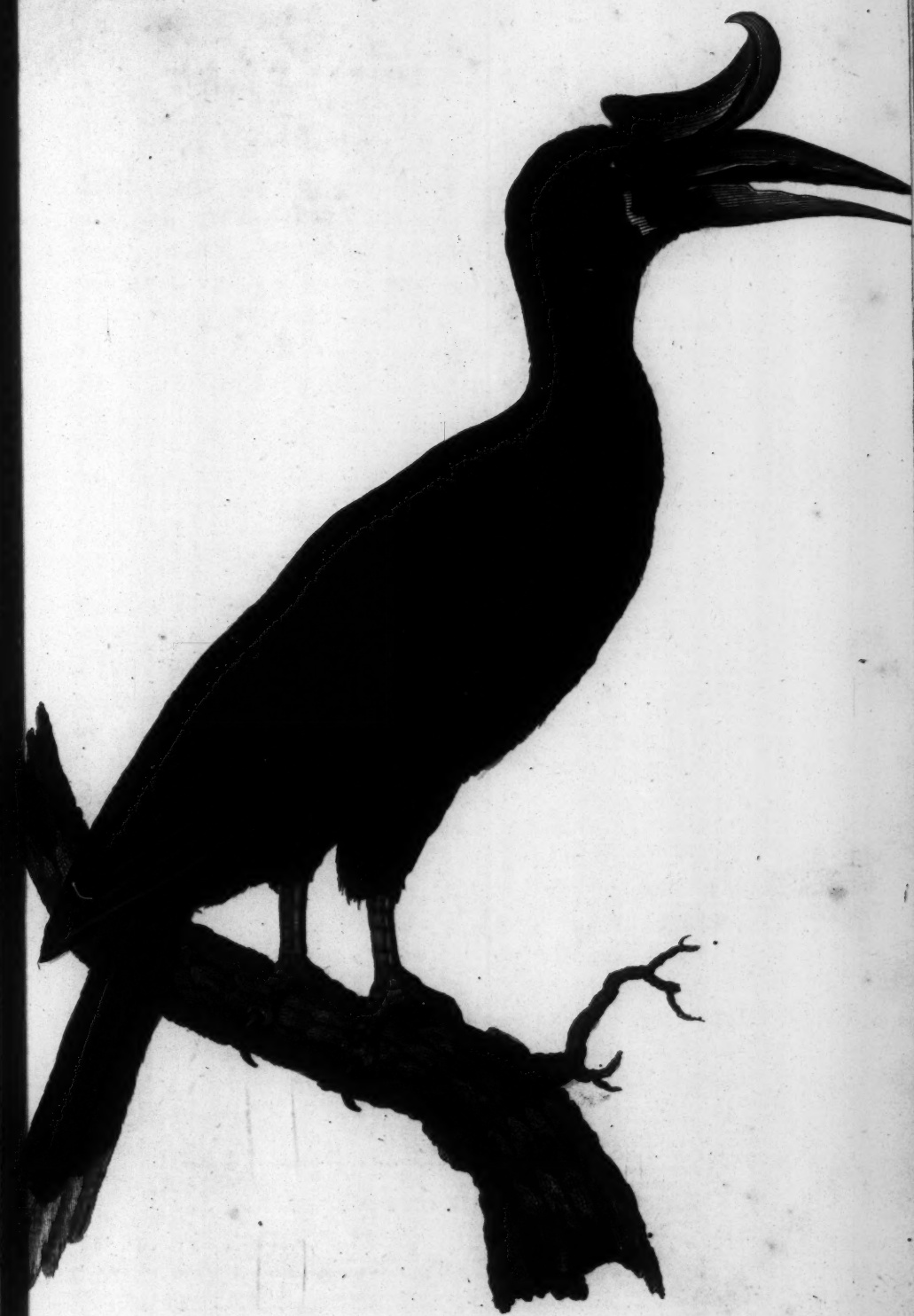
BUCEROS, THE HORNBILL.

THIS genus contains twelve species: they correspond in their habits, and even in their structure, to those of the preceding genus, and inhabit nearly the same parallels in the Old World. The distinguishing characters are as follow: Bill convex, knife-shaped, large, and serrated outwards; the front bare, and swelling with bone. Nostrils behind the base of the bill; tongue short and sharp; feet gressory. They are found in Africa, and in the islands of the Indian ocean, where they exceed the toucan in every monstrous dimension.

THE RHINOCEROS HORNBILL.

SOME authors have confounded this bird with the *tragopanda* of Pliny, which is the cassowary, known to the Greeks and Romans, and which was found in Barbary and the Levant, very remote from the native seat of this hornbill.---The rhinoceros bird seen by Bontius in the island of Java, is much larger than the European raven; it has an offensive smell, and is very ugly. Bontius thus proceeds: "Its plumage is all black, and its bill oddly fashioned; for on its upper part, there rises an excrescence of a horny substance which extends forward, and then bends back towards the top like a horn, and which is of a prodigious size, for it is eight inches long, and four broad at the base: this horn is variegated with red and yellow, and as if divided into two parts by a black line that extends on each of the sides lengthwise; the nostrils are placed below this excrescence near the root of the bill. It is found in Sumatra, in the Philippines, and in other hot parts of India."

Bontius relates some particulars with regard to the œconomy of these birds; he says that they live on carrion, and commonly follow the hunters of wild cows, boars, and stags, who, to lessen the trouble of conveying



The Rhinoceros Hornbill.

J. Chapman Sc.

Published Feb^y 1. 1802.



ing their game, are obliged to divide carcases, and send them to the boats on the river, lest the hornbills should devour them. Yet these birds attack no animals but rats and mice, and for that reason the Indians rear many of them. Bontius tells us that the hornbill first flattens the mouse in its bill to soften it; and then tosses it in the air, receives it in its wide throat, and swallows it in entire: indeed this is the only mode of eating compatible with the structure of its bill, and the smallness of its tongue, which is concealed almost in the throat. Such is the manner of life to which nature has reduced it, by bestowing a bill strong enough for prey, but too weak for fighting; cumbrous for use, a mere shapeless exuberance. The external superfluities and defects seem to have affected the mental faculties of the animal: it is melancholy and savage; its aspect is coarse, and its attitude heavy.

Synonymes.---*Buceros rhinoceros*, *Linn.* and *Gmel.* *Nasutus rhinoceros*, *Klein.* *Hydrocorax indicus*, *Briss.* *Topau*, *Borouk.* *Rhinoceros avis*, *Jobnst.* *Corvus indicus cornutus*, *Bontius.* *Tragopan*, *Moebring.* The horned pie of Ethiopia, *Charlton.* The horned Indian raven, or rhinoceros bird, *Will.* and *Lath.* The rhinoceros hornbill, *Lath.*

THE NASUTUS, OR BLACK-BILLED HORNBILL.

THIS bird has a very large bill, but simple, and without any excrescence; though fashioned like a sickle. It inhabits the hottest climates of the ancient continent, where the negroes give it the name of *tock*. It is about the size of a magpie. The young bird differs very much from the adult; for its bill is black, and its plumage ash-grey, and, with age, the bill becomes red, and the plumage blackish on the upper side of the body, on the wings, and on the tail; and whitish quite round the head, on the neck, and on all the lower parts of the body: it is also said, that the legs
are

are originally black, and grow afterwards reddish. These birds, which are pretty common in Senegal, are very simple when young; they will suffer a person to approach and catch them with the hand; and they may be shot at without being scared, or even without their stirring. But by age their disposition alters; they grow extremely shy, and escape to the summits of the trees; while the young ones remain on the lowest branches, and on the bushes, and continue perfectly still, their head sunk between the shoulders, so that the bill only is seen. The young birds are scarcely ever seen in flight, whereas the old ones soar in a lofty and rapid course. The young are most numerous in the months of August and September, when they appear as tame as if they had been reared in the house. But this conduct proceeds from their stupidity, for they do not even pick up the food that is thrown to them, and it must be put in their bill; which affords a presumption that the parents are obliged to maintain them for a great length of time. In their wild state they feed on fruits; but when domesticated will eat bread, and swallow almost any thing that is offered them. Specific character of the *buceros nasutus*: "Its front is smooth, its tail-quills white at the base and at the tip."

Synonymes.---*Buceros nasutus*, *Linn.* and *Gmel.* *Hydrocorax senegalensis erythrorhynchus*, *Hydrocorax senegalensis melanorhynchus*, *Briss.* The black-billed hornbill, *Lath.*

THE MANILLA HORNBILL.

THIS bird is rather larger than the preceding; it is twenty inches long; its bill two inches and a half, and less curved; not indented, but as sharp at the edges, and more pointed; above this bill, there is a prominent light festoon, adhering to the upper mandible, and forming a simple inflation; the head and neck are white, stained with yellowish, and marked with brown waves; there is a black spot on each side of the head

at the ears; the upper side of the body is blackish brown, with some whitish fringes wrought slightly in the quills of the wing; the under side of the body is dirty white; the quills of the tail are of the same colour with those of the wings, only they are intersected in their middle by a rufous bar, two fingers broad. We are unacquainted with the œconomy of this bird. Specific character of the *buceros manillensis*: "Above it is blackish brown, below dirty white, its bill not serrated; a small prominence." Synonymes.---*Buceros manillensis*, *Gmel.* The Manilla hornbill, *Lath.*

THE PANAYAN HORNBILL.

THE male and female of this species are of the same size, and nearly as large as the great European raven, rather longer and narrower shaped; their bill is very long and arched, indented along its edges above and below, terminated by a sharp point, and depressed at its sides; it is furrowed up and down, or across two thirds of its length; the convex part of these furrows is brown, and the concave spaces are of the colour of orpiment; the rest of the bill, near the point, is thin and brown; at the root of the bill, there rises upwards an excrescence of the same horny substance, flat at the sides, sharp above, and cut at right angles before; this excrescence extends along the bill to its middle, where it terminates, and its uniform height is equal to half the breadth of the bill; the eye is encircled by a brown membrane devoid of feathers; the eyelid bears a ring of hard, short, stiff bristles, which form real eyelashes; the iris is whitish; in the male, the head, the neck, the back, and the wings, are greenish black, changing into bluish, according to the position. In the female, the head and the neck are white, except a broad triangular spot, which extends from the base of the bill, below and behind the eye, as far as the middle of the neck across the sides; this spot is dark green, fluctuating like the neck and back in the male: the female

304 NATURAL HISTORY

female has also the neck and wings of the same colour as in the male; the top of the breast in both sexes is of a light brown red; the belly, the thighs, and the rump, are equally of a deep brown red; they both have ten quills in the tail, of which the upper two thirds are of a rusty yellow, and the lower third is a black transverse bar; the feet are lead colour, and composed of four toes, one of which is directed behind and three before; the middle one is connected to the outer toe as far as the third joint, and to the inner toe as far as the first only. Specific character of the *buceros panayensis*: "It is greenish black, below red brown, the prominence of the upper mandible sharp above, and flat at the sides." Synonymes.---*Buceros panayensis*, *Gmel.* The panayan hornbill, *Latb.*

THE HYDROCORAX, OR INDIAN HORNBILL.

THE Indian hornbill is two feet four inches long; the bill eight inches; but the legs are only two inches: this character of the shortness of the legs belongs not only to it, but to all the other hornbills, which walk with the utmost difficulty; the bill is two inches and a half thick at its origin; it is blackish cinereous, and supports an excrescence, whose substance is solid and like horn; this excrescence is flat before, and extends rounded to the upper side of the head; it has large black eyes, and its aspect is disagreeable; the sides of the head, the wings, and the throat, are black, and that part of the throat is surrounded with a white bar; the quills of the tail are whitish grey; all the rest of the plumage is variegated with brown, with grey, with blackish, and with fulvous; the feet are brown grey, and the bill blackish. These birds, says Bontius, do not live on flesh, but on fruits, particularly nutmegs, to which they prove very destructive; and that food communicates to the flesh, which is tender and delicate, an aromatic odour, that renders it more grateful to the palate.

Specific

Specific character of the *buceros hydrocorax*: "Its bony front is flat and truncated before, its belly fulvous." Synonymes.---*Buceros-hydrocorax*, *Linn.* and *Gmel.* *Hydrocorax*, *Briss.* *Corvus Indicus Bontii*, *Will.* *Corvus torquatus*, *Klein.* *Cariocatactes*, *Mærb.* Indian hornbill, *Latb.*

THE PIED HORNBILL.

THIS bird is larger than a raven, or twice as large as the common crow; it is two feet ten inches long, from the point of the bill to the extremity of the tail. Its bill is eight inches long and two broad, and bent from the straight position; a second bill, if it may be so called, sits like a horn close on the first, and follows its curvature, and is extended from the base to within two inches of the point of the bill. This horn has the shape of a true bill, truncated and closed at the extremity, but the junction is marked by a very perceptible furrow, drawn near the middle, and following all the curvature of this false bill, which does not adhere to the skull; but its posterior portion, which rises on the head, is still more extraordinary; it is naked and fleshy, and covered with quick skin, through which this parasite member receives the nutritious juices.

The true bill terminates in a blunt point; it is strong, and consists of a horny, and almost bony, substance, extended in *laminae*, and we may perceive the layers and undulations: the false bill is much thinner, and may be bent even by the fingers; it is of a light substance, disposed internally in little cells, which Edwards compares to those of a honey-comb: Wormius says that this false bill consists of a matter like crabs shells. The false bill is black, from the point to three inches behind, and there is a line of the same black at its origin, and also at the root of the true bill; all the rest is yellowish white. A white folded skin meets the root of the true bill above on both sides, and is in-

serted near the corners of the bill in the black skin that encircles the eyes; the eyelid is bordered with long lashes arched behind; the eye is red brown, and grows animated and sparkles when the bird is in commotion; the head, which appears small in proportion to the enormous bill which it bears, resembles much in its shape that of the jay: in general, the figure, the gesture, and whole form, of this bird, appears to be composed of the features and movements of the jay, the raven, and the magpie. These resemblances have struck most observers, and hence the bird has been called, the Indian raven, the horned crow, the horned pie of Ethiopia, &c.

The feathers on the head and neck are black, which it has the power of bristling; those of the back and wings are also black, with a slight reflection of violet and green. On some of the coverts of the wings, there is an edging irregularly traced, and the feathers seem bunched out like those of the jay; the stomach and belly are of a dirty white; among the great quills of the wings, which are black, the outer ones only are white at the point; the tail consists of six white quills black at the root, and four which from their shafts are entirely black; the legs are black, thick, and strong, and covered with broad scales; the nails, which are long, but not sharp, seem calculated for holding and clenching. This bird hops with both feet at once, forward and sidewise, like the jay and magpie, but does not walk. When at rest, its head seems to recline on its shoulders; when disturbed by surprise, it assumes an air of boldness and importance. This bird will eat lettuce and other vegetables, swallow raw flesh, catch rats, and devour small birds alive. It often repeats a hoarse cry, and sometimes another sound, much feebler, and exactly like the clucking of a turkey-hen when she leads her brood. It will spread and open its wings to the sun, but shudders at a passing cloud or a slight breeze.

Specific character of the *Bucco Malabaricus*: "It is black, below white; the prominence of its front rounded above, sharp towards the front, extended behind the eyes." Synonymes.---*Buceros Malabaricus*, *Gmel.* The pied hornbill, *Lath.*

THE AFRICAN HORNBILL.

THIS species is very large, its head alone and its bill making together eighteen inches in length; its bill is partly yellow and partly red; the two mandibles are edged with black: at the upper part of the bill, there is an excrescence of a horny substance, which is of the same colour, and of a considerable size; the fore part of this excrescence projects forward like a horn, it is almost straight, and does not bend upwards; the hind part is on the contrary rounded, and covers the top of the head; the nostrils are placed below this excrescence, near the origin of the bill: the plumage of this calao is entirely black. Synonymes.---*Buceros Africanus*, *Gmel.* *Hydrocorax Africanus*, *Briff.* African hornbill, *Lath.*

THE ABYSSINIAN HORNBILL.

THE bill of the Abyssinian species seems fashioned after that of the raven, only more bulky; the total length of the bird is three feet two inches; it is entirely black, except the great quills of the wings, which are white, the middle ones and a part of the coverts, which are of a deep tawny brown; the bill has an easy equal arch through its whole length, and it is flat and compressed at the sides; the two mandibles are hollowed internally with furrows, and terminate in a blunt point. The bill is nine inches long; it bears a semi-circular prominence that reaches from its root to near the front, two inches and a half in diameter, and fifteen lines broad at its base over the eyes; this excrescence is of the same substance with the bill, but thinner, and yields under the fingers; the height of

308 NATURAL HISTORY

the bill, taken vertically and joined to that of its horn, is three inches eight lines; the feet measure five inches and a half; the three fore toes are almost equal; the hind one is also very long, being two inches; all of them are thick, and covered, as well as the legs, with blackish scales, and furnished with strong nails, but which are neither hooked nor sharp: on each side of the upper mandible near its origin, is a reddish spot; the eyelids are provided with long lashes: a naked skin of violet brown encircles the eyes, and covers the throat and part of the fore side of the neck. Synonymes.---*Buceros Abyssinicus*, *Gmel.* *Abyssinian hornbill*, *Lath.*

THE BICORNIS, OR PHILIPPINE HORNBILL.

THIS bird, according to Brisson, is of the size of the turkey-hen; but its head is much larger, which indeed is requisite, to support a bill nine inches long, and two inches eight lines thick, and which carries, above the upper mandible, a horny excrescence six inches long, and three inches broad; this excrescence is a little concave on the upper part, and the two anterior angles are produced before into the shape of a double horn; it extends rounding on the upper part of the head; the nostrils are placed near the origin of the bill, below this excrescence. All the bill, as well as this excrescence, is of a reddish colour. The head, the throat, the neck, the upper side of the body, and the superior coverts of the wings and tail, are black; all the underside of the body is white; the quills of the wings are black, and marked with a white spot; all the quills of the tail are entirely black, except the two exterior ones, which are white; the legs are greenish. It inhabits the Philippine islands, and the East-Indies; and has a cry more like that of a hog-or a calf, than of a bird. The Gentoos rank it among their gods, and pay adoration to it. It lives chiefly in the woods, feeding on wild figs, almonds,

monds, and pistachio nuts, which it swallows whole; and, after the external parts have been digested, it brings up the nuts again whole, without the kernels being anywise damaged, or unfit for vegetation. Synonymes.---*Buceros bicornis*, Linn. and Gmel. *Hydrocorax Philippenfis*, Briss. Philippine hornbill, Lath.

THE ROUND HELMETED HORNBILL.

THIS is one of the largest and strongest of the genus; the bill is six inches long, from the corners to the point; it is almost straight, and not indented: from the middle of the upper mandible there rises and extends as far as the occiput, a wen shaped like a helmet, two inches high, almost round, but a little compressed on the sides; this protuberance, where it joins the bill, has an altitude of four inches and a circumference of eight. Aldrovandus gives a distinct figure of the bill of this bird, under the name of *Semenda*, a bird of India, whose history is still almost entirely unknown. Synonymes.---*Buceros Galeatus*. Helmet hornbill, Lath.

The following three species have been lately discovered, viz. The white hornbill, *buceros albus*; caught near the island of Tinian. The New Holland hornbill, *buceros orientalis*. The grey hornbill, *buceros griseus*, from New South Wales.

BUPHAGÆ, OR BEEF-EATER.

THE distinguishing characters of this genus are: bill straight and subquadrangular; the mandibles swelling and entire, swelling still more outwards; feet ambulatory. Only one species has yet been found, which is the following:

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THE AFRICAN BEEF-EATER.

BRISSON is the first who has described this bird, which Adanson brought from Senegal. It is not much larger than the crested lark, and its wings extend only fourteen inches. Its plumage has nothing remarkable; in general a greyish brown prevails on the upper part of the body, and greyish yellow on the under. The bill is not of an invariable colour; in some individuals it is entirely brown; in others red at the point, and yellow at the base; in all it is nearly of a quadrangular shape, and the points of the two mandibles are reflected in a contrary direction. The tail is tapered in steps, and a singular circumstance is observed, that the twelve quills, of which it consists, are all pointed. The first phalanx of the exterior toe is closely connected to that of the mid-toe. This bird is very fond of certain worms, or the larvæ of insects, which lodge under the epidermis in oxen. It alights on the backs of these animals, and pierces their skin with its bill, to extract these worms, and hence its name. Synonymes.---Le pique-bœuf, *Buff.* Buphaga Africana, *Linn.* and *Gmel.* Buphaga, *Briss.* African beef-eater, *Lath.*

CROTOPHAGÆ, OR THE ANI.

THIS remarkable genus of birds is distinguished by the following characters: the bill is thin, compressed, semi-oval, arched, and keel-shaped on the ridge, the upper mandible angled at both margins; nostrils round and pervious; the tongue flat, and pointed at end. Only three species of this bird have yet been discovered. They are found in Jamaica, St. Domingo, and other islands in the West-Indies; also at Cayenne, and other parts of South America. They cannot withstand the violence of the wind, and hurricanes destroy numbers of them. They inhabit the cultivated grounds, or such as have been
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in a state of cultivation, and they are never found in the lofty forests. They feed on various sorts of seeds and fruits, such as small millet, maize, rice, &c. and, when reduced to want, they eat caterpillars and other insects. We cannot say that they have a song or warble; it is rather a whistling or chirping: sometimes this becomes more varied, but it is always harsh and disagreeable; it receives different inflexions according to the passions which incite it. If the bird perceives a cat, or other dangerous animal, it informs its companions by a very distinct scream, which it prolongs or repeats until its apprehensions are quieted: its fears are most remarkable when it has young, for then it flutters and beats about its nest. These birds live in society, though they do not form into such large flocks as the stares; they seldom part from one another; and even previous to their hatching, we see several males and females working together at the construction of the nest, and afterwards the females hatch beside each other, each sitting on her eggs and rearing her young. This harmony is the more admirable, since love commonly dissolves all other ties but what it forms. Their amours commence early; in February the males ardently court the females, and in the following month they are busy in collecting materials for the nest. These birds are more lascivious than even sparrows; and, during the whole season of their ardour, they are much more lively and cheerful than at any other time. They breed in shrubs, coffee-trees, bushes, and hedges; and they place their nests in the cleft where the stem divides into several branches. When several females associate together, the one readiest to lay does not wait till the nest be completed, but sits on her eggs while the rest are employed in enlarging the fabric. They employ a precaution which is unusual with other birds, viz. to cover their eggs with leaves and grass-stalks, as fast as they lay them; and, during incubation, they
cover

cover their eggs in the same manner, if they are obliged to leave them in quest of food. The females which thus hatch beside each other are not quarrelsome, like hens that breed in the same crib; they take their stations in order: some, however, before they lay, make a partition in the nest with stalks of herbs, to contain their own eggs; but, if the eggs happen to be jumbled together, one female hatches them indiscriminately; she collects them, heaps them, and covers the whole with leaves, so as to diffuse the heat equally, and prevent its dissipation. Each female lays several eggs; they build their nest very solid, though rude, with the small stems of filamentous plants, the branches of the citron-tree, and other shrubs; the inside only is covered with tender leaves, that soon wither; and upon this bed the eggs are deposited. The nests are wide, and much raised at the margin; sometimes the diameter is more than eighteen inches, but its size depends on the number of females which it is destined to receive. It would be difficult to decide with accuracy whether all the females contained in the same nest have each their male; perhaps these birds are polygamous, in which case it would, in some measure, be necessary to enlarge the nests, and thus, without any friendly social principle, they might be constrained to unite in performing the work. The eggs are as large as those of a pigeon: they are of a uniform beryl, and have none of those little spots on the ends which are usual on the eggs of most wild birds. It is probable that the females hatch twice or thrice a year, according to circumstances; if the first succeeds, they do not make another till autumn; if, on the contrary, the eggs are robbed, or eaten by snakes or cats, they make a second, and towards the end of July, or during the course of August, they hatch a third time: certain it is, that their nests are found in the months of March, May, and August. They are gentle, and easily tamed; and it is said, that
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if they are taken young, they may be educated and taught to speak, though their tongue is flat and terminates in a point, while that of the parrot is fleshy, thick, and round.

The same friendship and concord which appears during incubation, continues after the broods are hatched; when the mothers have covered together, they feed successively all the little family. The males assist in bringing supplies; but when the females hatch separately they rear their young apart, yet without shewing any jealousy or ill temper; they carry the food by rotation, and the young ones receive it from all the mothers. The nature of the food depends upon the season, sometimes consisting of caterpillars, maggots, and insects, and sometimes of fruits and seeds, as millet, maize, rice, wild oats, &c. In a few weeks the young ones are able to try their wings, but they do not venture far; soon afterwards they perch beside their parents among the bushes, and then are exposed to the ravages of the birds of prey. The ani is an inoffensive bird; it does not plunder the rice plantations, like the blackbird; it does not feed upon the nuts of the cocoa-tree, like the woodpecker; nor does it consume the patches of millet, like the parrots and parrakeets.

THE SAVANNA ANI.

THIS species is about the size of a blackbird; but its large tail gives it a longer form; for this is seven inches, which is more than half the total length of the bird. The bill is thirteen lines long, and rises nine lines and a half; it is black, and so are the legs, which are seventeen lines long. The body is black, faintly shaded with violet reflexions, except a small edge of deep shining green, which borders the feathers on the upper part of the back and coverts of the wings, and which cannot be perceived at a little distance, for then the bird appears entirely black. The female

differs not much from the male. They are neither timorous nor shy, and never make any remote retreat. They are not scared by the report of fire-arms, and it is easy to kill many of them one after another. But they are in no request, for their flesh cannot be eaten, being rank, and of an offensive smell. Synonymes. ---*Crotophaga-ani*, *Linn. Gmel. and Bor.* *Crotophagus*, *Briss.* and *Gerini.* *Pittaco* congener *ani*, *Ray* and *Will.* *Monedula tota nigra major*, *Sloane* and *Brown.* *Cornix garrula major*, *Klein.* *Razor-bille blackbird*, *Catesby.* *Lesser ani*, *Lath.*

THE MANGROVE ANI.

THIS bird is larger than the preceding, and about equal to the jay; it is eighteen inches long, including the tail, which occupies the half of that extent; its plumage is nearly of the same brownish black colour as that of the former, only it is somewhat more variegated with brilliant green, which terminates the feathers of the back and the coverts of the wings; inasmuch that if we rested our opinion solely on the difference of size and colours, we might regard these two birds as only varieties of the same species; but what proves that they are really two distinct species is, that they never intermingle; the one kind constantly inhabits the open savannas, the other lodges among the mangroves only; yet the latter have the same natural habits with the former; they likewise keep in flocks; they haunt the brinks of salt marshes; they lay and hatch many of them together in the same nest, and seem to be only a different race accustomed to live in more wet situations, where the abundance of insects and reptiles affords an easier subsistence. Synonymes,---*Ani des palituviers*, *Buff.* *Crotophaga major*, *Gmel.* *Crotophagus major*, *Briss.* *Great ani*, *Lath.*

GLAUCOPIS, OR WATTLE-BIRD.

THE distinguishing characters of this genus are as follow: bill curved, vaulted; the under mandible shorter, and carunculated at the base: nostrils flat, half covered with a semi-cartilaginous membrane: tongue sub-cartilaginous, notched and ciliated at the tip.

Of this genus there is only one single species as yet known, which is the cinereous wattle-bird of New Zealand. It walks on the ground, and seldom perches on trees. It has a piping or murmuring voice; and its flesh is nutritive and well tasted. It is in length fifteen inches.

CORVUS, THE CROW.

THIS genus of birds contains the ravens, the crows, the rooks, the daws, the magpies, and the jays; the number of species now known is forty-six, besides several varieties. Most of them occur in every climate, and are consequently well known. They are exceedingly noisy; nestle upon trees, and lay six eggs; and take both animal and vegetable food. Their distinguishing characters are these: bill convex, and knife-shaped; nostrils hid beneath reclining bristly feathers; tongue cartilaginous and bifid; feet ambulatory. The species are as follow:

THE RAVEN.

THIS bird has always been famous, though it has ever been regarded as the lowest of the rapacious tribe. Filth and rotten carcases, it is said, are its chief food; and, when it gluts its appetite on live prey, its victims are the weak and defenceless animals, as rabbits, leverets, &c. yet it sometimes attacks the larger animals, as weakly kids and lambs. This indiscriminating voracity of the raven has procured it various treatment: sometimes it has been proscribed

as a pernicious destructive animal; sometimes it has been afforded the protection of law, as useful in extirpating noxious insects. In poor thinly-inhabited states, the raven may prove a burthenfome and unwelcome guest; but in rich populous countries, it will be found serviceable by devouring the filth generated in them. For this reason it was formerly held sacred in England, and people were forbidden to kill it. In Surinam, according to Dr. Fermin, the raven enjoyed a similar protection; but in the narrow islands of Ferro, Malta, &c. a premium was offered for its destruction.

If to these features of the raven, we join its gloomy plumage; its cry still more gloomy; its ignoble port, in proportion to its bulk; its savage look; its body smelling perpetually of infection; we shall not be surprised that in all ages it has been regarded as an object of aversion. Its flesh was forbidden to the Jews; and savages never eat it but with disgust. In every country the raven is reckoned an ominous bird, which announces impending calamities. Grave historians have described pitched battles between armies of crows and those of other ravenous birds, and have regarded these combats as foreboding the bloody wars kindled among nations. And how many persons, even at present, are alarmed and dejected at the noise of its croaking! the whole of its knowledge of futurity is limited, however, like that of the other inhabitants of the air, to a greater sensibility to the changes in its element, and to the expression of its feelings by certain cries and actions. In the southern provinces of Sweden, Linnæus informs us, that the ravens, in fine weather, soar to an immense height, and make a clangorous noise, which is heard at a great distance. The authors of the British Zoology add, that in this case they fly generally in pairs. Other writers, in less enlightened times, have given other remarks, mingled with fable and superstition.

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In those times, when augury formed a part of religion, the ravens, though bad prophets, could not fail to be birds of vast importance. The fondness of prying into futurity, how dismal however may be the prospect, was an ancient speculation of the human race. All the various motions of the raven were studied with the most scrupulous attention, the circumstances of its flight, and the differences of its voice, of which, not to mention the minute discriminations too difficult to be appretiated, no less than sixty-four distinct inflexions were reckoned up. Each had its determined signification; the artful applied themselves to the profession, and credulity drew multitudes to their oracles. Pliny himself, though superior to the prejudices of the vulgar, was so far carried away by the tide of popular opinion as to mention its most infamous cries. Some even carried this folly to such lengths as to eat the heart and entrails of these birds, from the hope of acquiring the spirit of prophecy. But the raven has not only a great number of inflections of voice corresponding to its interior affections, it has also the talent of imitating the cry of other animals, and even human discourse; and, to improve this natural quality, the ligament of the tongue has been cut. *Colas* is the word, according to *Belon*, which it pronounces the most easily; and *Scaliger* heard one which, when hungry, called distinctly on the cook by the name of *Conrad*. *Scaliger* adds, as a pleasant anecdote, that this same raven, having found a paper with written music, pricked with its bill as if it were reading and beating time. It seems more natural to suppose that the bird mistook the notes for insects, on which it sometimes feeds. These speaking birds were highly prized at Rome, and Pliny has not disdained to relate the history of one of them. Being early accustomed to speak, it flew every morning to the rostra, and saluted *Tiberius*, then the two *Cæsars*, *Germanicus*, and *Drusus*, and afterwards

afterwards the Roman people as they passed by. They certainly can be tamed though old, and appear even susceptible of a lasting and personal attachment. Witness the tame raven mentioned by Schwenckfeld, which having suffered itself to be carried too far by its wild companions, and not being able to regain its way, discovered afterwards on the high road the man who had been used to feed it, hovered some time croaking above his head, as if to pay him homage, then alighted upon his arm, and never more left him.

In consequence of their pliancy of temper, they can be instructed, not indeed to divest themselves of their voracity, but to moderate it and direct it to the service of man. Pliny speaks of Craterus, an Asiatic, who was noted for his skill in breeding ravens to hunt, and who could make himself be followed even by the wild ravens. Scaliger relates, that Louis XII. had one so trained, and used it in the chase of partridges. Albertus saw one at Naples which caught partridges and pheasants, and even other ravens; but to hunt birds of its own species it required to be roused, and, as it were, forced by the presence of the falconer. It can sometimes be taught, it would seem, to protect its master, and assist him against his enemies by its manœuvres: at least if we give credit to the story which Aulus Gellius tells of the crow of Valerius. A Gaul of high stature having challenged the bravest Roman to single combat, a tribune named Valerius stepped forth and proved victorious by the assistance of a raven which perpetually harrassed his antagonist, tearing his hands with its bill, and darting at his face and eyes. Valerius afterwards bore the name of the Raven (*Corvus*). This story is also related by Livy, lib. vii. 26. The Gauls were so much intimidated by the fall of their champion, that the Romans gained a complete victory. The raven is said to have perched on the head of Valerius, and was regarded as a token of victory sent down from heaven: so that it must have

have been a wild raven. But the story is evidently fabulous.

The raven has also wonderful sagacity in scenting carrion from a distance: Thucydides ascribes to it the instinct of abstaining from the carcases of animals that have died of the plague. It has been said also, that a bird of this kind, wanting to drink out of a vessel which was too narrow to admit it, had the shrewdness to drop into it small stones, which by degrees raised the water to the top. This thirst, if the fact be true, is a circumstance which distinguishes the raven from all the rest of the birds of prey, especially from those which feed on live game, which are stimulated by hunger, and never desire but to drink blood. Another difference is, that the ravens are more social than the other rapacious birds: but it is easy to account for this; since, as they eat every sort of food, and have more resources than the rest of the carnivorous kind, they can subsist in greater numbers on the same extent, and have not therefore the same causes of separation. We may here observe, that tame ravens feed on all sorts of flesh, and those in the state of liberty are supposed to commit great havoc among the moles and field-mice. It is said, that in the Isle of France, a certain species of raven is religiously kept, with a view to destroy the rats and mice. *Voyage d'un Officier du Roy*, 1772, p. 122. It is said that the islands of Bermudas having been ravaged five years in succession by a prodigious multitude of rats, which devoured the plants and trees, and crossed, by swimming, from one island to another; these rats suddenly disappeared, and no cause could be assigned, except that a great number of ravens had, in the latter years, resorted to the islands, which were never seen there either before or since. But we have no proof that ravens prey much upon rats: the inhabitants of the Isle of France may, like others, entertain a prejudice; and, with respect to the rats of the Bermuda islands,

islands, they may have been starved to death ; they may have devoured one another, as often happens ; or they may have been drowned in their passage between the islands.

The real mountain ravens are not birds of passage, and in this respect they differ, more or less, from the crows with which they associate. They seem particularly attached to the rock where they were bred, or rather where they have paired ; it is their ordinary residence, which they never entirely abandon. If they descend into the plains, it is to procure their subsistence ; and this more rarely happens in summer than in winter, because they avoid the heat, which appears to be the only influence that different seasons produces on them. They do not pass the night in the woods like the carrion crows ; they choose, in their mountains, a retreat sheltered from the northern blast, under the natural alcoves secured by the recesses and projections of the rocks. Thither they retire during the night, to the number of fifteen or twenty. They sleep perched on the bushes that grow between the rocks, and build their nests in the crevices, or in the holes of walls, on the tops of old deserted towers, and sometimes on the high branches of large straggling trees. Linnæus says, that in Sweden the raven nestles chiefly upon the pines. And Frisch asserts, that in Germany they pitch mostly upon great oaks ; that is, they prefer the loftiest trees, whether pines or oaks. Aldrovandus says they maintain their conjugal engagements sometimes forty years together. Each male attaches itself to a female, with which it remains united for the course of many years ; for these birds, which we view with disgust, can yet inspire mutual and constant love, and, like the turtle, express the gradual swell of passion. The female is distinguished from the male, according to Barrere, by its plumage being of a lighter black, and her bill weaker. She lays, about the month of March,

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five or six eggs, pale and bluish green, marked with a great number of spots and streaks of a dirty colour. She sits about twenty days, during which time the male provides her with food; and the supply is large, for the peasants sometimes find in the ravens' nests, or near them, considerable heaps of grain, nuts, and fruits. It has been suspected, indeed, that this hoarding is intended, not only for the females during incubation, but for the subsistence of both through the winter. When the young are hatched, they are far from being of the colour of their parents; they are rather white than black, contrary to the swans, which are originally brown, though destined to wear a snowy plumage. At first the mother seems to treat her offspring with indifference, nor does she feed them till they begin to be feathered; it has been alleged, that she alters her conduct the moment she is convinced by their plumage that they are not spurious; she then feeds her young with the proper aliments, which previously undergo a preparation in her crop, and are then disgorged into their bills, nearly as in pigeons. But the male not only provides for the family, but watches for its safety: if he perceive a kite, or other such rapacious bird, approach the nest, the danger animates his courage; he takes wing, gains above his foe, and dashing downwards he strikes violently with his bill; both contend for the ascendancy, and sometimes they mount entirely out of sight, till, overcome with fatigue, one or both fall to the ground.

Aristotle, and many others after him, pretend that, when the young are able to fly, the parents drive them out of the nest; and, if the tract where they are settled affords too scanty a subsistence, they entirely expel them from their precincts. If this were true, it would shew that they are really birds of prey; but it does not agree with the observations which Hebert has made on the ravens which inhabit the mountains of Bugey; for they protract the education of their brood beyond

the period when these are able to provide for themselves.---Gefner fed young ravens with raw flesh, small fishes, and bread soaked in water. They are very fond of cherries, and swallow them greedily, with the stones and stalks; they digest however only the pulpy part, and in two hours afterwards return the rest. It is also said that they disgorge the bones of those animals they eat entire, like the kestrel, the nocturnal birds of prey, the fishing birds, &c. Pliny says, that the raven is subject every summer to a periodical distemper, which lasts sixty days, whose principal symptom is excessive thirst: but this is probably nothing but moulting, which is more tedious in this bird than in many others of the rapacious tribe.

No person seems to have determined the age at which the young ravens acquire their full growth, and are able to propagate. If in birds, as in the quadrupeds, each period of life were proportional to the total space of existence, we might suppose that the crows required many years to reach their adult state; for, though the venerable age ascribed by Hesiod must be considerably curtailed, it seems well ascertained that this bird sometimes lives a century or more. In many cities of France they have been known to attain to that distant period; and in all countries and all ages, they have been reckoned as birds extremely long-lived. But the progress to maturity must be slow in this species compared to the duration of their life; for towards the end of the first summer, when all the family consort together, it is difficult to distinguish the old from the young, and very probably they are capable of breeding the second year. Hesiod assigns nine of our ages to the crow, the quadruple to the stag, and this tripled to the ravens." Pliny, lib. vii. 48. If we estimate a generation at thirty years, the age of the crow would be 270 years; that of the stag, 1080 years; and that of the raven, 3240 years. The only way to give a reasonable sense to the passage, is to understand

derstand the *ætas* of Pliny, and the *γῆρας* of Hesiod, to mean a year: and, on this supposition, the life of the crow would be reckoned at nine years; that of the stag, thirty-six; and that of the raven, 108, as proved by observation."

We have already remarked that the crow is not black at first. In the decline of life also, its plumage loses the deep colour; and in extreme age, changes into yellow. But at no time is this bird of a pure black, without the intermixture of other shades: Nature knows no absolute uniformity. The black, which predominates, is mingled with violet on the upper part of the body, with cinereous on the throat, and with green under the body and on the quills of the tail, and the largest feathers of the wings and the remotest of the back. Only the feet, the nails, and the bill, are quite black; and this colour of the bill seems to penetrate to the tongue, as that of the feathers appears to tincture the flesh. The tongue is cylindrical at its base, flattened and forked near the tip, and roughened with small points on the edges. The organ of hearing is very complicated, and more so, perhaps, than in other birds. It must also be more sensible, if we credit Plutarch, who says, that he has seen crows fall down stunned with the noisy acclamations of a numerous multitude, agitated by violent emotions.

The appetite of the raven, which is reconciled to every sort of aliment, proves often its destruction, from the ease with which bird-catchers can provide a bait. The powder of the *nux vomica*, which is mortal to so many quadrupeds, is also a poison to the raven; it is benumbed, and drops soon after eating the dose; but the moment of intoxication must be seized, for the torpor is often only transient, and the bird recovers strength sufficient to reach its native rock, there to languish or expire. It is also caught by various sorts of nets, snares, and gins, and even by the bird-call, like the little warblers; for it also entertains an antipathy

to owls, and cannot see them without venting a cry. It is said to wage war with the kite, the vulture, and the sea-pie; but this is nothing but the natural aversion to all carnivorous birds, which are enemies or rivals of each other.

When the ravens alight upon the ground, they walk, but do not hop. Like the birds of prey, they have long vigorous wings, extending nearly three feet and a half; these consist of twenty quills, of which the two or three first are shorter than the fourth, which is the longest of all; and the middle ones have a remarkable property, viz. that the ends of their shafts stretch beyond the vanes, and terminate in points. The tail contains twelve quills, which are about eight inches long, but somewhat unequal, the two middle ones being the longest, then those next, so that the end of the tail appears somewhat rounded on its horizontal plane. Add to this, that the ravens have on almost their whole body a double sort of feathers, so closely adhering to the skin, that they cannot be plucked without the help of hot water. From the extent of its wings we may infer the elevation of its flight. In storms and tempests the raven, it is said, has been seen gliding thro' the air, conveying fire at its bill. This is only the luminous star formed at the point of its bill, in its passage through the elevated regions of the atmosphere, then surcharged with electricity. From some appearance of this kind, probably, the eagle hath been termed the minister of thunder; for there are few fables but are founded upon truth.

Since the raven has a lofty flight, and is capable of enduring every temperature, the wide world is opened for its reception. In fact, it is scattered from the polar circle to the Cape of Good Hope and the island of Madagascar; and its number is determined by the quantity of food which the various intermediate regions supply, and the convenience of the situations which they afford. It sometimes migrates from the coast of Barbary

Barbary to the island of Teneriffe. It is found in Mexico, St. Domingo, and Canada, and undoubtedly in the other part of the New Continent, and of the adjacent islands. When it has once settled in a country, and has become accustomed to its situation, it seldom quits it to roam into another. It grows even attached to the nest which it has built, and uses it for several years together.

Its plumage is not the same in all countries. Besides the change which age introduces, the colour is also subject to vary from the influence of climate. It is sometimes entirely white in Norway and Iceland, where numbers are also quite black. On the other hand, white ravens are found in the heart of France and Germany, in nests where some are likewise black. The Mexican raven, called *cacalotl* by Fernandez, is variegated with two colours. That of the Bay of Saldagne has a white collar; that of Madagascar, named *coach*, according to Flaccourt, is white under the belly. The same mixture of black and white occurs in some individuals of the European sort, even in what Brisson terms the *white raven of the North*. These variations in the plumage of a bird so generally and so deeply impressed with black as the raven, is a proof that colour can afford no permanent or essential character. There is another kind of raven, which forms a variety in point of size. Those of Mount Jura, for instance, appeared to Hebert, who had an opportunity of comparing them, to be larger than those which inhabit the mountains of Bugey; and Aristotle informs us, that the ravens and hawks were smaller in Egypt than in Greece. The specific character of the raven, *corvus-corax*, Linn. is "That it is black; its back of a black sky-colour; its tail somewhat rounded." The raven weighs three pounds, and is twenty-six inches long. In the northern countries of Finmark, Iceland, and Greenland, it frequents the huts of the natives, feeds upon the offals of seals, and also devours birds eggs. It whirls dexterously

terously in the air, and changes its prey from bill to feet, for relief. It replies to the echo of its croak. The male sits by day, and the female by night. On the approach of storms it gathers under the shelter of crags. The Greenlanders eat its flesh, clothe themselves with its skin, make brushes of its wings, and split the quills for fishing-lines. When a physician, among the American savages, visits a patient, he invokes the raven, as the sign of returning health: the Esquimaux, however, detest and dread the whole genus.

Synonymes.---Le corbeau, *Buff.* *Corvus-corax*, *Linn.* and *Gmel.* *Corvus*, *Briss.* *Klein.* and *Will.* The corbey, *Sibb.* *Scotia Illustrata.* In Greek, *ραπαξ*; in Latin, *corvus*; in Spanish, *cuervo*; in Italian, *corvo*; in German, *rabe*, *rave*, *kol-rave*, (*coal-raven*): in Swedish, *korp*; in Polish, *kruk*; in Hebrew, *oreb*, in Arabic, *gerabib*; in Persian, *calak*; in old French, *corbin*. The appellations bestowed, in all languages, are evidently formed from the raven's croak. The Scotch name *corbey*, like many others of that dialect, was introduced from the French. The English word *raven* is derived from the German *rabe*.---M. Montbeillard, objects to the indiscriminating application of the name *corvus*, to the crows, daws, choughs, &c. The *corvus* of the ancients was appropriated to the large species, the raven differing from the rest considerably in its habits and instincts. It is as large as a good cock, and would weigh three carrion crows and two rooks.

THE INDIAN RAVEN.

THIS bird is found in the Molucca islands, and chiefly at Banda. Bontius, the first who has seen it, reckons it a raven, in which he is followed by Ray, Willoughby, and others. It resembles the raven in the shape of its bill and in its port; though its neck is rather longer, and a slight protuberance appears in the rising of the bill.

Bontius

Bontius says that it feeds upon nutmegs; and Willoughby considers this feature as different from the character of the common raven; but we have already seen that these eat wild nuts, and are not so much carnivorous as generally supposed.

The flesh of the Indian raven has a pleasant aromatic flavour, derived of course from the nutmegs, which constitute its principal food; and it is extremely probable that, if our raven had the same sort of aliments, it would lose its rank smell.

It would require to have seen the raven of the desert (*graab el zabara*), which Dr. Shaw mentions, to be able to refer it with certainty to its analogous European species. Shaw gives it also the names *crow of the desert*, *red-legged crow*, or *pyrrhocorax*. The doctor says, it is rather larger than our raven, and that its bill and feet are red. This last character determined Dr. Shaw to reckon it a large chough.

We find in Kœmpfer two other birds mentioned by the name of ravens; the one is of a middle size, but extremely audacious; it was brought from China to Japan as a present to the emperor. The other which was also given to the emperor of Japan was a bird from Corea, exceedingly rare, and called *coreigaras*; that is, the raven of Corea. Kœmpfer adds, that the ravens which are common in Europe are not found in Japan, no more than the parrots and some other birds of India.

Linnæan character of Bontius' Indian raven: "Its front bony, plain, and bare before, its belly yellow." It is often tamed, and employed to catch rats and mice: it is thirty inches long. Synonymes.---*Buceros-hydrocorax*, *Linn.* and *Gmel.* *Corvus Indicus Bontii*, *Ray* and *Will.* *Corvus torquatus*, *Klein.* The Indian hornbill, *Lath.*

THE CHOUGH, OR RED-LEGGED CROW.

MANY authors have confounded this bird with the Alpine crow; but the distinction is clearly marked. Its bill is longer, more slender, more hooked, and of a red colour; its tail also shorter, its wings longer, and, as a natural consequence, its flight is more lofty; and its eyes are environed by a small red circle. It is true that the red-legged crow resembles the Alpine in the colour and in some common instincts. In both, the plumage is black, with green reflections of blue and purple, which have an admirable effect on that dark ground. Both delight in the summits of the loftiest mountains, and seldom descend into the plain. The former, however, is much more diffused than the latter. The chough, or red-legged crow, is of an elegant figure, lively, restless, turbulent, but can be tamed to a certain degree. It has a shrill and loud cry, very like that of the sea-pie. It chatters almost incessantly; and Olin remarks, that it has been bred, not for its voice, but for its beautiful plumage. Belon, and the authors of the British Zoology, say, that it learns to speak.

The female lays four or five white eggs, spotted with dirty yellow. She builds her nest on the tops of old deserted towers, or on frightful precipices; and Edwards remarks, that these birds prefer the cliffs in Cornwall, and all along the west coast of England, to similar situations on the flat shores of the east and south. Belon, who saw them on Mount Jura in Switzerland, again observed them in the island of Crete, and always on the summits of rocks. But Hasselquist affirms that these birds arrive in Egypt, and spread through the country after the inundation of the Nile has subsided, and the waters are about to return into their bed. If we admit this fact, we must suppose that they are drawn to Egypt by the abundance of food with which the lands are replete, after being left

by the waters to the powerful influence of a tropical sun: and, in fact, they feed on insects, and on seeds which have been lately committed to the soil, and swell with milky juice, the effect of incipient vegetation. It follows then, that these birds do not confine their residence exclusively to rocks and the summits of mountains, since at certain seasons they regularly appear in Lower Egypt. Nor do they seem to be equally attached to every bleak eminence; but to be directed in their choice by certain peculiar circumstances, which have hitherto escaped observers.

The specific character of the chough, *corvus-graculus*, Linn. is, that "it is blackish violet, its bill and feet red." It resembles the jackdaw in habits and size, being sixteen inches long: it is voracious, gregarious, and circles as it flies. Borlase says, that it is not so mischievous as commonly represented, the tricks of the jackdaw being often imputed to it by mistake.

Synonymes.---Le crave, ou le coracias, Buff. *Corvus-graculus*, Linn. and Gmel. *Gracula pyrrhocrax*, Scop. *Coracias*, Aldrov. and Briss. *Coracias*, seu *pyrrhocrax*, Ray. *Cornix rostro pedibusque rubris*, Klein. The Cornish-chough, Cornwall-kae, or killegrew, Alb. and Will. In Greek, *κορακίας*; and in modern Greek *scurapola*; in Cambden's Latin, *avis incendiaria*; in Italian, *spelviero*, *taccola*, *tatula*, *pazon*, *zorl*, *cutta*; in French, *chouette* and *choucas rouge*; in German, *stein-taben* (*stone-daw*), *stein-tulen*, *stein-krae*.

THE HERMIT CROW.

THIS bird is about the size of a hen; its plumage is black, with fine green reflections, which are variegated nearly as in the chough; like it, the bill and feet are red; but the bill is longer and more slender, very proper for inserting into the fissures of rocks and the cracks in the ground, into the holes of trees and walls, in search of insects and worms, which are its principal food. In its stomach are found portions of the mole-

crickets. It eats also the *larvæ* of the May-bug, and is useful on account of the havoc which it makes among these destructive insects. The feathers on the top of its head are longer than the rest, and form a kind of crest, which hangs backwards; but this only appears after they are full grown, and again disappears when they are aged. Hence the reason that in some places they are called *bald crows*, and in some descriptions they are represented as having a yellow head marked with red spots. These colours are probably the tints of the skin, which age leaves bare. The hermit crows fly very lofty, and generally go in flocks. They seek their food often in the meadows and marshy places, and always nestle on the tops of old deserted towers, or in the clefts of inaccessible rocks. Sensible, as it were, that their young are delicate meat, and much valued by the luxurious, they are careful to breed them out of the reach of man. But there are still some men hardy enough to risk their lives, and allow themselves to be let down by ropes from great heights, to plunder the infant brood in their recesses, and reap the most dangerous of harvests. The females lay generally two or three eggs every hatch: and those who wish to get the brood, commonly leave a young bird in each nest, in order to invite them to return the following year. The young are easily tamed, and the more so if they be taken early and before they can fly. They arrive in the country of Zurich towards the beginning of April, at the same time with the storks. Their nests are sought for about Whit Sunday, and they depart, the earliest of all the birds, in the middle of June.

The hermit crow inhabits the Alps, the lofty mountains of Italy, Stiria, Switzerland, Bavaria, and the high cliffs which border on the Danube, in the vicinity of Passau and Kelkeym. These birds choose for their retreat certain natural breast-works, or cells of a good aspect, among the rocks, and hence the name *klaufs-rappen*,

rappen, or *monk-raven*. Specific character: "Greenish, head yellowish, back of the head somewhat crested, the bill and feet red."

Synonymes.---*Le coracias huppé ou le sonneur*, Buff. *Corvus-eremita*, Linn. and Gmel. *Coracia cristata*, Briss. *Corvus sylvaticus*, Gesneri. Will. *Upupa montana*, Klein. Gesner's wood-crow, Will. Wood-crow from Switzerland, Alb. In Zurich it is called *scheller*, *waldrapp*, *stein-rap*; in Bavaria and Stiria, *clausen-rap*; in Italian, *corvo spileto*; in Polish, *kruk-lesny*, *nocny*.

THE CARRION CROW.

THESE birds spend the summer in the extensive forests, from which they occasionally emerge to procure subsistence for themselves and their infant brood. Their favourite food in the spring is partridges eggs, for which they search with great diligence, and are so dexterous as to pierce them and to carry them on the point of the bill to their young. Though they are not the most sanguinary of the rapacious tribe, we may reckon them the most destructive; but, fortunately, they are not numerous. During winter they live with the rooks and hooded crows, and nearly in the same way; sauntering among our flocks and shepherds, hovering near the tracks of our labourers, and sometimes hopping upon the backs of hogs and sheep, with such familiarity, that they might be taken for tame domestic birds. At night they retire into the woods to roost on the large trees, which they seem to choose as the general rendezvous, whither they resort from every quarter, sometimes from the distance of three miles round, and whence they again sally out in the morning in quest of subsistence.

Towards the end of winter, which is the season of their amours, the carrion crows disappear in the plains, and retire into the next large woods or forests, where they form into pairs, and seem to divide their territory

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into districts of about a quarter of a league in diameter, each of which maintains its separate family. It is said that this connexion subsists inviolate during the rest of their life; and it is even alleged that if one of the couple happen to die, the survivor will never enter into another union. The female is distinguished by her plumage, which is of inferior lustre. She lays five or six eggs, and sits about three weeks, during which time the male supplies her with food.

When a buzzard or kestrel approaches the nest, the parents unite to attack them, and dart with such fury that they often kill them, splitting their skull with their bills. They also fight with the shrikes; but these, though smaller, are so bold as often to prove victorious, drive them from the nest, and plunder the young. Like the raven, the crow can be taught to speak; it is also omnivorous: insects, worms, birds eggs, fish, grain, fruits, every thing, in short, is suited to it. It breaks nuts by dropping them from a height; it visits snares and gins, and shares the plunder. It even attacks small game when exhausted or wounded, which in some countries has made it be bred for falconry; but in its turn it becomes the prey of a more powerful enemy, such as the kite, the eagle, owl, &c.

Its weight is ten or twelve ounces; it has twelve tail feathers, all equal, and twenty in each wing, of which the first is the shortest and the fourth the longest; its wings spread three feet; the apertures of the nostrils is round, covered with a sort of bristles projecting forward; it has some black specks round the eyelids; the outer toe of each foot is united to that of the middle at the first joint; the tongue is forked, and slender; the ventricle somewhat muscular; the bottom of the feathers, or part which is concealed, is of a deep ash-colour.

As this bird is exceedingly cunning, has an acute scent, and flies commonly in large flocks, it is difficult to come near it, or to decoy it into snares. They are destroyed

destroyed by throwing to them garden beans, of which they are very fond, and in which rusty needles have been concealed: but the most singular mode of catching them is as follows:---a carrion crow is fastened alive on its back firmly to the ground, by means of a brace on each side at the origin of the wings. In this painful posture the animal struggles and screams; the rest of its species flock to its cries from all quarters, with the intention, as it were, to afford relief. But the prisoner, grasping at every thing within reach to extricate himself from his situation, seizes with his bill and claws, which are left at liberty, all that come near him, and thus delivers them a prey to the bird-catcher. They are also caught with cones of paper baited with raw flesh; as the crow introduces his head to devour the bait, which is near the bottom, the paper being besmeared with birdlime, sticks to the feathers of the neck, and he remains hooded, unable to get rid of this bandage, which covers his eyes entirely; he betakes to flight, rises almost perpendicularly into the air, the better to avoid striking against any thing, till, quite exhausted, he sinks down always near the spot from which he mounted. In general, though the flight of the carrion crows be neither easy nor rapid, they mount to a very great height, where they support themselves long, and whirl much.

This species has, like the raven, varieties of white, and of white mixed with black; but all seem to have the same instincts. Frisch says that he once saw a flock of swallows travelling with a troop of variegated crows in the same direction. He adds, that these pass the summer on the coasts of the ocean, subsisting on what the waves cast ashore; that in autumn they migrate to the south, never in large bodies, but in small divisions at certain intervals from each other. It is very probable that the crows of the Maldivas, mentioned by Francis Pyrard, are of the same kind; since that traveller, who saw them very distinctly, remarks no difference.

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They seem to be however more familiar and bolder than ours; for they entered houses to pick up whatever suited them, and the presence of a man did not discompose them. Another traveller says, that these Indian crows, when they get into a chamber, delight in doing all the mischievous tricks that are ascribed to monkeys; derange the furniture, and tear it with their bills, overturn lamps, ink-stands, &c.

According to Dampier, there are in New Holland and New Guinea many carrion crows which resemble ours. There are also some in New Britain; but it would seem, that though there are many in France, England, and part of Germany, they are scarce in the north of Europe. Klein mentions that they are rare in Prussia. They must be very uncommon in Sweden, since not even the name occurs in the enumeration which Linnæus has given of the birds of that country. Father Tertre assures us also that they are not to be found at all in the Antilles; though, according to another traveller, they are very common in Louisiana. Specific character of the carrion crow, *corvus corone*, Linn. "All of a sky-black, its tail rounded, its tail-quills sharp." Its length is eighteen inches, its breadth twenty-six. It is more frequent in England than in any other part of Europe.

Synonymes.—Corbine, ou corneille noire, Buff. *Corvus corone*, Linn. and Gmel. *Cornix*, Gesner; Ray, Will. Klein, Briss. &c. In Greek, *κορῶν*, which name was also applied to the prow of a ship, from the resemblance to the crow's beak: in modern Greek, *κορῶνα*, *κορῶνα*, *κορῶνα*; in Chaldaic, *kurka*; in Italian, *cornice*, *cornacchia*, *cornacchio*, *gracchia*; in Spanish, *corneia*; in German, *kraë*, whence the English name.

THE ROYSTON OR HOODED-CROW.

THIS bird is easily distinguished from the carrion-crow by the colour of its plumage. Its head, tail, and wings, are of a fine black, with bluish reflections; it is marked

marked with a sort of scapulary of a greyish white, which extends both ways, from the shoulders to the extremity of the body. On account of this appearance, it has been called by the Italians, *monacchia*, or *nun*, and *mantled crow* by the French. It associates in numerous flocks, like the rook, and perhaps is still more familiar with man, preferring, especially in winter, the vicinity of farms and hamlets, and picking up its food in the kennels and dunghills, &c. Like the rook also, the hooded-crows change their abode twice a-year, and may perhaps be considered as birds of passage; for we annually perceive immense flocks arrive near the middle of autumn, and depart about the beginning of spring, shaping their course towards the north; but we are uncertain where they stop. Most authors assert, that they pass the summer on the lofty mountains, and build their nests in the pines or firs; it must therefore be on mountains uninhabited and little known, as in those of the Shetland isles, where they are actually said to breed. In Sweden also they nestle in the woods, especially among the alders, and lay commonly four eggs; but they never settle in the mountains of Switzerland, of Italy, &c.

Though, according to most naturalists, it lives on every sort of food, worms, insects, fish, and even putrid flesh, and, above all, on the products of milk; and though these facts would rank it among the omnivorous tribe, yet as seeds of various kinds, mixed with small stones, are found in its stomach, we may infer, that they are nearest allied to the granivorous species; and this is another trait in their character common to the rook. In other respects, they resemble much the carrion crow; they have nearly the same size, the same port, the same cry, and the same flight; the structure of their tail, wings, bill, and feet, the disposition of their internal parts, are exactly the same; and, if any difference can be perceived, they incline to the nature of the rook. They often associate together, and nestle
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on the trees; both lay four or five eggs, eat those of small birds, and sometimes devour the helpless animals themselves.

Analogies so striking to the carrion-crow and the rook, would lead us to suspect that the hooded-crow is only the hybridous offspring of these two species. If it were only a variety of the carrion-crow, why does it fly in flocks, and shift its abode twice a-year? or, if it were merely a variety of the rook, whence those numerous relations which it bears to the carrion-crow? But this double resemblance will be easily explained, if we admit it to be a cross-breed, participating of the qualities of both. This opinion would appear plausible to philosophers who are accustomed to trace physical analogies; but it derives additional probability from the consideration that the hooded-crow is a new family, entirely unknown to the ancients.

Frisch says, that the hooded-crow has two cries; the one hollow and well-known, the other shrill and somewhat resembling the crowing of a cock. He adds, that it is ardently attached to its young, and that, if the tree on which its nest is built be cut down, it will fall with it, rather than abandon its offspring. A similar story is told by White, in his "Natural History and Antiquities of Selborne in Hampshire." A pair of ravens had, for a course of years, been accustomed to breed in an ancient oak: the tree was cut down in the month of February, when the birds were sitting, and the dam was crushed by the fall.

Linnæus seems to apply to this bird what is said in the British Zoology with respect to the rook, that it is useful in destroying obnoxious insects. But do they not themselves destroy more grain than the insects which they extirpate? In many parts of Germany a price is set on their head. They are caught in the same snares as are the other crows. They are found in all the countries of Europe, but at different times. Their flesh has a strong smell, and is unfit for food. Specific character

character of the hooded-crow, (*corvus-cornix*, Linn.): "Ash-coloured, its head, throat, wings, and tail, black. It weighs twenty-two ounces; its length twenty-two inches, its alar extent twenty-three. It is a bird of passage in Great Britain, appearing in the beginning of winter, and returning with the woodcocks. It is found as far north as the Feroe islands and Lapmark, where it continues the whole year, but chiefly on the sea-coast, subsisting on shell-fish. Its toes are very broad and flat, which enables it to walk on marshy grounds."

Synonymes.---Le corneille mantelée, *Buff.* *Corvus cornix*, Linn. and Gmel. *Cornix cinerea*, Briss. *Cornix cinerea frugilega*, Gessn. and Ald. Royston crow, Ray and Will. This species seems to have been unknown to the ancient Greeks and Romans. The moderns have given it the Latin appellations, *cornix-cinerea*, *varia*, *hyberna*, *sylvestris*; *corvus semi-cinereus*; in Italian, *mulacchia* or *monacchia*; in Swedish, *kraoka*; in Polish, *wrona*; in German, *holzkrae*, *schiltkrae*, *nabelkrae*, *bundtekrae*, *punterkrae*, *winterkrae*, *afskrae*, *grauekrae* (i. e. wood-crow, shield-crow, navel-crow, pied-crow, punctured-crow, winter-crow, ash-crow, grey-crow). The name hooded-crow is common in Scotland.

THE SENEGAL CROW.

TO judge of this from its shape and colours, which is all that we know of it, we should suppose it most analogous to the hooded crow, and differing only because its white scapulary is not so much extended. Some distinctions are also perceived in the length of its wings, the shape of its bill, and the colour of its feet. This bird is described in Pallas's Travels, and Gmelin thus states its specific character: "It is black, its nape whitish, its neck and breast white." It is of the size of the jackdaw, being twelve inches long. It arrives in numerous flocks early in the spring, in the neighbourhood of Lake Baikal, from China and the southern

338 NATURAL HISTORY

parts of the Mogul empire. Synonymes.---*Corvus dauricus*, *Gmel.* and *Pallas.* White-breasted crow, *Lath.* and *Kolben.*

THE JAMAICA CROW.

THIS West-Indian crow seems to be modelled from ours, only its tail and feet are smaller; its plumage is black, like that of the carrion-crow. In its stomach are found red berries, grain, and caterpillars; which shews that its ordinary food is the same with that of our rook and our hooded-crow. Its ventricle is muscular, and lined in the inside with a very strong coat. This bird abounds in the southern part of the island, and never leaves the mountains, in which respect it resembles our raven. Klein characterises this species by the largeness of its nostrils; but Dr. Sloane, whom he quotes, says only, that they are moderately large.

It is obvious that it belongs to the crows; but it would be difficult to refer it to any one species, since it unites the qualities proper to each, and differs from them all by its continual chattering. Specific character: "Totally black;" it is eighteen inches long. Synonymes.---*Corvus jamaicensis*, *Gmel.* *Cornix jamaicensis*, *Briff.* Chattering-crow, or cacao-walk, *Ray*, *Sloane*, and *Lath.*

THE ROOK.

THIS bird is of intermediate size between the raven and the carrion crow, and it has a deeper cry than either of them. What distinguishes it the most, is a naked white skin, scaly and sometimes scabby, that encircles the base of the bill, instead of those black projecting feathers, which in the other species of crows extend as far as the aperture of the nostrils. Its belly is not so thick or strong, and seems, as it were, rasped. These differences, apparently so superficial, imply more radical distinctions. The peculiarities of the
rook

rook result from its mode of life. It feeds upon grain, roots, and worms; and as, in search of its proper subsistence, it penetrates deep in the ground with its bill, which in time becomes rough, the feathers at the base are worn off by the continual rubbing. However, the straggling feathers are perceived there; a sufficient proof that the bird is not naturally bald. The appetite of the rook is confined to grain, worms, and insects; it never prowls in the kennel, nor eats any sort of flesh: it has also the muscular ventricle and the broad intestines of the granivorous tribe.

These birds fly in numerous flocks, which are sometimes so immense as to darken the air. We may conceive what havock these hordes of reapers will commit on newly-sown fields or on crops nearly ripe. Accordingly, in some countries government has interfered. The British Zoology vindicates them from the aspersions, asserting that they do more good than harm, by destroying the chaffer-maggots and caterpillars that gnaw the roots of the useful plants, and blast the honest labours of the husbandman. Be this as it may, they are certainly very destructive to newly-sown wheat. They search out the lands where it is sown, and, watching them more carefully than the owners, they perceive when the seed first begins to shoot up its blade; this is the time of their feeding on it. They will not be at the pains of searching for it at random in the sown land, for that is more trouble than so small a grain will requite them for: but, as soon as these blades appear, they are by them directed, without loss of time or pains, to the places where the grains lie; and in three or four days time they will root up such vast quantities, that a good crop has been often thus destroyed in embryo. After a few days, the wheat continuing to grow, its blades appear green aboveground; and then the time of danger from these birds is over; for then the seeds are so far robbed of their mealy

matter, that they are of no value to that bird, and it will no longer give itself the trouble to destroy them.

Wheat that is sown so early as to shoot up its green blades before the harvest is all carried in, is in no danger from these birds; because, while it is in a state worth their searching for, the scattered corn in the harvest fields is easier come at, and they feed wholly on this, neglecting the sown grain. But, as this cannot always be done, the best remedy the farmer has is to watch well the time of the corn's being in the condition in which they feed upon it; and, as this lasts only a few days, he should keep a boy in constant pay to watch the field from day-break till the dusk of the evening. Every time they settle upon the ground, the boy should throw up a dead rook into the air: this will always make them rise; and by degrees they will be so tired of this constant disturbance, that they will seek out other places of preying, and will leave the ground even before the time of the corn's being unfit for them. The reason of their rising at the tossing up of their dead fellow-creature is, that they are a bird extremely apprehensive of danger, and they are always alarmed when one of their comrades rises. They take this for the rising of an out-bird, and all fly off at the signal.---Rooks are very clamorous, especially when they have young. Ten or twelve nests are sometimes found on the same tree, and a great number of trees thus furnished occur in the same forests, or rather in the same district. They seek not retirement and solitude, but rather prefer settling near our dwellings. Schwenckfeld observes, that they commonly prefer the large trees planted round cemeteries; because perhaps these are frequented spots, or afford worms in greater plenty; for we cannot suppose that they are attracted by the scent of the dead bodies, since we have already said that they will not touch flesh.

Rooks begin to build their nest in the month of March, at least in England; and their society appears to

to be regulated by a complete system of jurisprudence. They seem indeed to have some idea of separate property. No one is allowed to carry off the materials from another's nest, and every crime against the interests of the community is punished with severity. The delinquent is attacked by those who are invested with authority; he is by them chastised according to the nature of his offence, and sometimes banished from the commonwealth. They lay four or five eggs, smaller than those of the raven, but marked with broader spots, especially at the large end. It is said that the male and female sit by turns. When the young are hatched, and able to eat, they disgorge their food, which they keep in reserve in their craw, or rather in a sort of bag formed by the dilatation of the œsophagus. After their hatch is over, they leave the trees where they nested; and return not again till the month of August, and begin to repair their nests in October. It is said that the herons take advantage of their absence to lay and hatch in their nests. They continue the whole year in England; but in France, in Silesia, and in many other countries, they are undoubtedly birds of passage, if we except a few; the only difference is, that in France they announce the winter, while in Silesia they are the forerunners of the summer. The rook is an inhabitant of Europe according to Linnæus; but it would appear that there are some exceptions, since Aldrovandus is of opinion that there are none in Italy. It is said that the young ones are good eating, and that even the old ones are tolerable food when fat, but this is very rare. Country people have less aversion to their flesh, knowing that they subsist not on carcases, like the ravens and the carrion crows. Specific character of the rook, *corvus frugilegus*, Linn. "Black, its front ash-coloured, its tail somewhat rounded." The rooks are remarked to fly chiefly in the morning and the evening. The *erucæ* of the dor-beetle (*scarabæus melolantha*, Linn.) are what they search for in the

the ground. They advance no nearer the pole than the south of Sweden.

Synonymes.---Le freaux, ou la frayonne, *Buff.* *Corvus frugilegus*, *Linn.* and *Gmel.* *Cornix frugilega*, *Briss.* and *Klein.* *Cornix nigra frugilega*, *Ray, Will.* and *Frisch.* In Greek, σπειρολογος, or seed-gatherer; which is also the meaning of the Latin name, *frugilega*; in German, *roeck*; whence the English name and the Swedish *roka*; in Dutch, *koore-kraey*; in Polish, *gawron*.

THE JACKDAW.

IN general the jackdaws are smaller than the crows; and their cry is shriller. They live upon insects, grain, fruits, and even flesh, though very rarely; but they will not touch filth, nor do they haunt the coasts to pick up the dead fish and other carcases that are cast ashore by the sea. In this circumstance they resemble more the rook, and even the Royston crow, than the carrion-crow; but they approach the latter by the habit of searching and hunting for partridge eggs, of which they destroy great numbers.

They fly in large flocks, like the rooks; like these, too, they form a sort of cantonments, which are even more numerous, consisting of a multitude of nests crowded upon one another, in a large tree, in a belfry, or in the ruins of an old deserted castle. The male and female, when once paired, remain a long time steadily united. When the genial season returns, which awakens the sensibility of the animal frame, they eagerly court each other's society. After fecundation, the female lays five or six eggs, marked with a few brown spots on a greenish ground; and, after the young are hatched, she watches, feeds, and rears, them with an affection which the male is eager to share. In this respect the jackdaw resembles the crows, especially the common sort: but Charlton and Schwenckfeld assert that it has two hatches in the year; which has never been

been affirmed of any of the crows, though it well corresponds to the order of nature, the small species being always the most prolific.

The jackdaws are birds of passage, though they are not so well entitled to that appellation as the rooks and hooded-crows, since a number of them continue in the country through the summer. The towers of churches are at every season stocked with them, and so are all old buildings which afford the same convenience and shelter. Those which migrate form themselves into great bodies, like the rooks and the hooded-crows; sometimes they join the same army, and continually chatter as they fly. They leave Germany in autumn with their young, and appear not again till the spring. They can be easily tamed and taught to speak. They seem fond of the domestic state; but they are faithless servants, concealing the food which they cannot consume, and secreting bits of money and jewels.

The common jackdaw is about the size of a pigeon; its iris is whitish, it has some white streaks under its throat, some dots of the same colour round its nostrils, and some of an ash colour on the hind part of the head and neck; the rest is entirely black, which is deeper on the upper parts, and glossed sometimes with violet, sometimes with green.

There is a variety called the chough daw, which differs from the preceding in being rather smaller, and perhaps less common; its iris is bluish, as in the rooks; the prevailing colour of its plumage is black, without any cinereous mixture, and small white points are observed round its eyes. But in every other respect they are exactly alike, and there is no reason to doubt that they belong to the same species, and would breed together. This is the *monedula nigra* of Brisson, which Linnæus makes to be a variety of the common jackdaw, *corvus monedula*.

We need not be surpris'd that birds so nearly related to the crows should present the same varieties. Al-
drovandus

drovandus saw in Italy a jackdaw with a white collar; this is probably the same with what is found in many parts of Switzerland, and which for this reason the English call the *helvetian daw*. This is the *monedula-torquata* of Brisson, which Linnæus regards as a variety. It is also the *collared-jackdaw* of Latham.

Schwenckfeld had occasion to see a white daw, with a yellowish bill. These white daws are more common in Norway and the cold countries; in the temperate climates even, as in Poland, a small white daw is sometimes found in the nest of the black daws or choughs: in this case the colour of the plumage does not depend on the influence of climate, but arises from a natural defect; in the same way as white ravens are bred in France, and white negroes born in Africa. Schwenckfeld speaks of a variegated daw, which resembles the true jackdaw, except that its wings are white, and its bill hooked. He also mentions another daw, which is very rare, and differs from the common kind in its being crossed. But these are, perhaps, individual varieties, or uncommon productions. Specific character of the jackdaw, *corvus monedula*, Linn. "It is dusky, the back of its head hoary, its wings and tail black." The jackdaw weighs nine ounces; its length thirteen inches, and its breadth twenty-eight. It is found as far north as Sondmor, and sometimes in the Feroe islands; it leaves Smoland and East Gothland immediately after harvest, and returns in the spring with the staves.---Mr. White, in his Natural History of Selborne, relates a singular fact: that, in a neighbouring warren, the daws sometimes breed under ground in the rabbit-burrows.

Synonymes.---Les choucas, Buff. *Corvus-monedula*, Linn. and Gmel. *Cornix garrula*, Klein. *Graculus*, seu *monedula*, Gesner. *Monedula*, seu *lupus*, Aldrov. Ray, and Briss. Kae, Sibbald. In Greek, λυκος, κολιος, βαιμολοχος; in Latin, *lupus*, *graccus*, *gracculus*, *monedula*, (which Scaliger derives from *moneta*, a coin, on

on account of this bird's disposition to pilfer;) in Spanish, *graio*, *graia*; in Italian, *ciagula*, *tattula*, *pola*; in German, *tul* or *dubl*, *thale* or *dable*, *thaleche* or *dablike*; in Saxon, *aelcke*, *kaeyke*, *gacke*; in Swifs, *graake*; in Dutch, *kaw*; in Flemish, *gaey*, *bannekin*; in Swedish, *kaja*; in Turkish, *tschauka*.

THE ALPINE DAW.

PLINY calls this bird *pyrrhacorax*, which name alone includes an abridged description. *Korax*, which signifies crow, marks the blackness of its plumage, as well as the analogy of its species; and *pyrrhos*, which means rufous or orange, denotes the colour of its bill, which, in fact, varies between yellow and orange; and also that of its feet, which are still more variable, since they were red in the subject examined by Gefner, and black in the one described by Brisson. That author mentions also their being sometimes yellow, and others relate that they are yellow in winter and red in summer. Pliny believed the *pyrrhacorax* to be of the Alps; but Gefner, who has accurately pointed out the distinction between it and the red-legged crow, says, that in certain parts of the country of the Grisons, this bird does not appear in winter; and in other parts that it is seen nearly the whole year, but that its favourite residence, where it settles in numerous flocks, is the summit of lofty mountains. These facts restrict somewhat the opinion of Pliny, but at the same time they confirm it.

The Alpine daw is of a middle size, between the jackdaw and the carrion crow: its bill is smaller, and more arched, than either; its cry is shriller and more plaintive than the jackdaw, and by no means agreeable. Schwenckfeld says, that the *pyrrhacorax*, which he terms also the *night-crow*, is noisy, especially during the night, and seldom appears in the day. It lives chiefly upon grain, and is very destructive among the crops; its flesh is very indifferent eating. The inhabitants of the mountains draw meteorological predictions from its

346 NATURAL HISTORY

manner of flying: if it rises aloft, they lay their account for cold; if it keep near the surface, they expect mild weather. Specific character of the *corvus-pyrrhocorax*, Linn. "It is blackish, its bill yellowish, its feet black." It is fifteen inches long.

Synonymes.---Le choquard, ou choucas des Alpes, Buff. *Corvus-pyrrhocorax*, Linn. and Gmel. *Pyrrhocorax*, Gesner and *Aldrovandus*. Alpine crow, Lath. In Swiss, *alpkachtel*, *wildtul* (*alp-kae*, *wild-daw*); in German, *bergdol*, *alpraap*, (*mountain-daw*, *alp-raven*.)

THE MUSTACHIO DAW.

THIS species is nearly the size of the blackbird; its plumage is of a glossy black, and its tail is proportionably longer than in any other of them; all the feathers which compose it are equal, and the wings, when closed, do not extend half its length; the fourth and fifth are the longest of all, reaching two inches and a half farther than the first.

There are two circumstances to be remarked in the exterior of this bird: 1. Those long and flexible black hairs which arise from the base of the upper mandible, and which are twice as long as the bill; besides many other hairs, shorter and stiffer, and pointing forwards, and spreading over the base, as far as the corners of the mouth. 2. Those long and narrow feathers inserted in the upper part of the neck, which play on the back, and form a sort of mane. Specific character: It is greenish black, its tail equal, with very long mustachios." Its length is eleven inches and a quarter. Synonymes.---*Corvus Hottentottus*, Linn. and Gmel. *Monedula Capitis Bonæ Spei*, Briss. The Hottentot crow, Lath.

THE BALD-DAW.

THIS singular daw corresponds to the rook: the anterior part of its head is bare as in the rook, and its throat is only shaded with a few straggling feathers.
Its

Its relation to the daws in general is marked by the length of its wings, the shape of its feet, its port, its bulk, and its wide nostrils, which are almost round. But it differs, because its nostrils are not covered with feathers, and are placed in a deep cavity on either side of the bill, and also because its bill is broader near the base, and scalloped at the edges. It is a native of Cayenne. Specific character: "It is dusky-ferruginous, its front and top bald." It is rather larger than the jackdaw, being thirteen inches long. Synonymes. --- *Corvus calvus*, *Gmel.* Bald crow, *Lath.*

THE NEW GUINEA DAW.

THE natural place this bird ought to occupy is between our daws and the *colnud*. It has the figure of the daws, the grey plumage of one of them, at least, on the upper part of the body; but it is not so large, and its bill is broader in the base, in which it resembles the *colnud*. It differs from the last by the length of its wings, which reach almost to the end of its tail, and from the *colnud* and the daws by the colours of the under-side of the body, which consist of black and white stripes, that extend to the wings, and which bear some resemblance to those in the variegated woodpecker. Synonymes. --- *Corvus Novæ Guineæ*, *Gmel.* New Guinea crow.

THE PAPUAN DAW.

THE prevailing colour of this bird is an ash-grey, deeper in the upper side, and lighter in the under, and diluting, by degrees, almost to white under the belly and the parts adjacent. There are only two exceptions to this uniformity of plumage, viz. a black ring, which surrounds the base of the bill, and extends as far as the eyes; and the great quills of the wings, which are of a blackish brown.

In this bird the nostrils are, as in the preceding, entirely covered with white feathers; the bill is nearly

similar, except that the ridge of the upper mandible is not round as in the jackdaws, but angular as in the *colnud*. It bears other relations also to the last, and resembles it in the proportions of its wings, which extend no farther than the middle of its tail; in the smallness of its feet, and in the shortness of its nails. Its length, reckoning from the point of the bill to the extremity of the tail, is about thirteen inches. We owe this new species, as well as the preceding, to Sonnerat. Specific character: "It is cinereous, its belly white, its wing-quills dusky blackish." Synonymes. ---Le choucarl de la Nouvelle Guinée, *Buff.* *Corvus papuensis*, *Gmel.* Papuan crow, *Lath.*

THE COLNUD, OR BARE-NECKED DAW.

THIS species like the bald daw, has a very broad bill at the base, and resembles it also in another respect, in being bald; but this is in a different way, the neck being almost naked and featherless. Its head is covered, from the nostrils inclusively, with a sort of black velvet cap, consisting of small straight feathers, short, interwoven, and very soft to the feel; these are more straggling under the neck, and much more so under the sides and in the hind part. The *colnud* is nearly of the size of the jackdaw; its plumage is entirely black, except some of the coverts and the wing-quills, which are of a whitish grey.

To look at the feet, one would suppose that the hind-toe was forcibly turned back; but this is its natural position, and it can be directed forward occasionally, as in the martins. It is connected with a membrane to the inner toe in each foot. Specific character: "It is black, having a cape waved with soft feathers; its neck thinly covered with feathers." Synonymes. --- *Corvus nudus*, *Gmel.* The bare-necked crow, *Lath.*

THE BAL-CASSIO, OR PHILIPPINE DAW.

THE wings of this bird extend only fifteen or sixteen or sixteen inches, and it is scarcely larger than a blackbird: its bill is thicker and longer in proportion than in any of the European daws, its feet slenderer, and its tail forked. Instead of the shrill gloomy cries of the jackdaws, it has a soft pleasant song. Such differences would lead us to expect many more, when the bird is better known. Its bill and feet are black; its plumage of the same colour, with green reflections; its colour is nearly the same, therefore, with that of the jackdaw. Specific character: "It is of a greenish black, its tail forked." Synonymes.---*Corvus-balicassius*, *Gmel.* *Monedula philippensis*, *Briss.* Philippine crow, *Lath.*

THE MAGPIE.

THIS bird resembles the crow so much in its external form, that Linnæus has classed them under the same genus; and Belon remarks, that if the tail of the magpie was shortened, and the white removed from its plumage, it would be really a crow. In fact, the magpie has the bill, the feet, the eyes, and the general shape, of the crows and jackdaws; it has also many of their instincts and habits, for it is omnivorous, living on all sorts of fruits, and devouring even carrion, robbing the small birds' nests of the eggs and the young, and seizing sometimes the parents, either by an open attack, or by surprising them in their nest.

Its fondness for live flesh has suggested the breeding it for falconry, like the ravens. It commonly spends the warm season paired with its female, and engaged in hatching and breeding its young. In the winter it goes in flocks, and approaches the hamlets, where it has greater resources, which the severity of the season renders the more necessary. It is easily reconciled to the sight of man, and soon grows familiar in the house.

It

It will easily learn to imitate the cries of animals, and even the human voice. One is mentioned which could exactly mimic the calf, the kid, the sheep, and even the notes of the shepherd's pipe: another repeated completely the flourish of trumpets. Plutarch relates that a magpie, which amused itself with imitating human discourse, the cry of animals, and the sound of the instruments, having one day heard a flourish of trumpets, became mute all of a sudden, which surprised persons who had been accustomed to hear it chatter incessantly; but they were much more surprised some time after, when, quite unexpectedly, it broke silence, not to repeat its usual lesson, but to copy the notes and modulations of the trumpets.

Willoughby knew many which could pronounce whole phrases. *Marget* is the word commonly given them, because they can the most readily articulate it; and Pliny assures us, that this bird is very fond of that sort of imitation, is pleased with repeating the words it has learned, studies patiently and earnestly to recal those it has lost, is overjoyed with the discovery, and sometimes dies of vexation, if its recollection fails it, or if its tongue refuses to pronounce a hard word.

The tongue of the magpie is like that of the raven, for the most part black. It alights on the backs of hogs and sheep, like the jackdaw, and searches after the vermin which infest these animals; with this difference, however, that the hog receives its civilities with complaisance; but the sheep, no doubt more delicate and sensible, seems to dread it. It also snaps, very dexterously, the flies and other winged insects which come in its way.

The magpie can be caught by the same snares, and in the same manner, with the carrion-crow, and it is addicted to the same bad habits of stealing and hoarding up provisions; habits almost ever inseparable in the different species. It is imagined also to forebode rain,
when

when it chatters more than usually. On the other hand, many circumstances concur to separate it from the crows.

It is much smaller than even the jackdaw, not weighing more than eight or nine ounces; its wings are shorter, and its tail longer in proportion, and hence its flight is neither so lofty, nor so well supported. It never undertakes distant journies, but only flies from tree to tree. When on the ground, it is in a continual flutter, hopping as much as walking, and briskly wagging its tail. It shews, in general, more restlessness and activity than the crows; it is more malicious, and is disposed to a species of raillery. The female accordingly displays greater art and contrivance in the construction of her nest; whether because she is more ardent for the male, and therefore more attached to its young, or because she is aware that many birds of rapine are forward to plunder its eggs and its brood, and besides, that some of them are prompted to retaliate. She places her nest on the tops of the loftiest trees, or at least on high bushes, and, with the assistance of the male, strengthens it on the outside with flexible twigs and worked mud, and environs the whole with a basketing of small thorny branches closely entangled, leaving only in the thickest and most accessible side a small hole for entering. But, not contented with safety alone, she seeks convenience; she lines the bottom of the nest with a sort of round mattresses, on which the young repose soft and warm; and though this lining, which is the true nest, be only six inches in diameter, the whole mass, including the thorny embrasure, is at least two feet every way.

But all these precautions are not sufficient to remove her anxiety and apprehensions: she is perpetually on the watch; if she perceives a crow to approach, she flies immediately to meet him, harasses him, and pursues him to a distance. If the enemy be more formidable, a falcon for instance, or an eagle, yet will not

fear restrain; she rushes on danger with a temerity which is not always crowned with success. Her conduct must sometimes, however, be more considerate, if we believe what is alleged, that, when she sees a person spying her nest with too envious an eye, she transports the eggs to some other place, between her claws. She lays seven or eight eggs, and hatches only once a year, unless the nest be destroyed or deranged, in which case she constructs another, and both parents exert themselves with such ardour as to complete it in less than a day. They have afterwards a second hatch, consisting of four or five eggs; and, if they be again disturbed, they will rebuild the nest, and make a third hatch, though still smaller than the preceding. The eggs of the magpie are never so large, or of so deep a colour, as those of the raven: they are marked with brown spots, strewed on a blue-green ground, most crowded about the thick end. Liebhault, quoted by Salerne, is the only one who affirms that the male and female sit alternately. The magpies are hatched blind and shapeless, and it is some time before they assume their destined form. The mother not only rears them with an anxious care, but takes an interest in them after they are grown up. Their flesh is bad eating, though it is not held in such aversion as that of young crows.

With respect to the difference remarked in the plumage, it would appear not absolutely specific; since, among the ravens, the crows, and the jackdaws, individuals are found variegated, like the magpie, with black and white: we must admit, indeed, that in the former black is the ordinary colour, as the mixture of white and black is in the latter. But this is not uniform; and if we examine the bird closely, or view it in certain lights, we may perceive shades of green, purple, and violet, not expected in a bird so little celebrated for beauty of plumage. The male is distinguished from the female by the deeper blue gloss on the upper
part

part of its body, and not by the blackness of its tongue, as some have alleged.

The magpie is subject to moult, like the other birds; but it is observed, that the feathers drop successively and by degrees, except those on the head, which are detached all at once, so that at the annual return of the season it appears bald. The young ones do not get their long tail before the second year; and, no doubt, this is the time when they become adult. All we can learn with respect to the duration of the life of the magpie is, that Dr. Derham kept one twenty years, when it grew blind with age.

This bird is very common in England, France, Germany, Sweden, and in every part of Europe, except Lapland; it is also rare in mountainous countries, which shews that it cannot support excessive cold. It has twenty quills in each wing, the first of which is very short, and the fourth and fifth the longest; twelve unequal quills in the tail, diminishing always in length the farther they are from the two middle ones, which are the longest of all; the nostrils round; the internal eye-lids marked with a yellow spot; the edges of the beak beset with hairs; tongue blackish, and forked.

There are white magpies as well as white ravens; and though the principal cause of this change of the plumage is the influence of northern climates, as may be supposed of the white magpie of Wormius, which was brought from Norway, and even of some of those mentioned by Rzaczynski; yet they are sometimes found in temperate climates; for instance, the one mentioned by Salerne, which was caught some years ago in Sologne, entirely white, except a single black feather in the middle of its wings. Whether it had migrated from the northern countries to France, after having undergone this change, or was bred in France, and the change of colour owing to some accidental cause, is a circumstance utterly unknown. We must say the same of the white magpies that have been seen in Italy.

Specific character of the *corvus-pica*, Linn. "Variegated with black and white, its tail wedge-shaped." Its length is eighteen inches, its breadth only twenty-four. It is found also in the island of Madeira.

Synonymes.---La pie, Buff. *Corvus pica*, Linn. and Gmel. *Pica varia et caudata*, Gesner and Aldrov. *Pica rusticorum*, Klein. Magpie, pianet, or piot, Will. Alb. &c. In Greek, *κωρα*, or *κωττα*, and on account of its variegated plumage, *ποικιλις*; in Latin, *pica*, *cissa*, and according to some, *avis pluvia*, (rain-bird); in wretched modern Latin, *ajacia*; in Spanish, *pega*, *picata*, *pagazza*; and in Catalonia, *grassa*; in Italian, *gazza*, *ragazza*, *aregazza*, *gazzuola*, *gazzara*, *pica*, *putta*; in German, *acloter*, *atxel*, *aegerst*, *agerluster*; in Flemish, *aexter*; in Polish, *stroka*; in Swedish, *skata*, *skuira*, *skara*; in Danish, *skade*; in Norwegian, *skior*, *tunfugl*.

THE SENEGAL MAGPIE.

THIS is somewhat less than the European; but its wings, being proportionably longer, are nearly of the same extent; its tail, on the contrary, is shorter, though of the same shape. The bill, the feet, and the nails, are black, as in the common magpie, but the plumage is very different. It has not a particle of white, and all the colours are dull; the head, the neck, the back, and the breast, are black, with violet reflections; the quills of the tail and the great quills of the wings are brown. All the rest is blackish, with different degrees of intensity.

THE JAMAICA MAGPIE.

THIS bird weighs only six ounces, and is about a third smaller than the common magpie, which it resembles in its bill, its feet, and its tail. The plumage of the male is black, with purple reflections; that of the female is brown, darker on the back and all the upper side of the body, and lighter under the belly.

They

They build their nest on the branches of trees. They are found in every part of Jamaica, but are most numerous at a distance from the scene of bustle. After breeding, they quit their concealments, and in autumn they spread over the settlements in such prodigious multitudes, as sometimes to darken the air. They fly thus in flocks for miles, and, wherever they alight, they occasion considerable damage to the planters. In winter, their resource is to crowd to the barn-doors. Such facts would lead us to suppose that they are frugivorous; but they have a strong smell, and their flesh is rank and coarse, and seldom eaten.

This bird differs from our magpie, not only in its mode of feeding, in its size, and in its plumage, but is besides distinguished by its being able to continue long on wing, by its associating in numerous flocks, and by the rankness of its flesh. The difference of sex is attended with a still greater in the colours. In short, if we add that the common magpie could not traverse the immense ocean which separates the two continents, and could not support the intense cold of a northern passage, we may conclude the American magpies to be analogous to ours, and their representatives in the new world, but not derived from the same common stock.

The tesquizana of Mexico seems to bear a great resemblance to this Jamaica magpie; since, according to Fernandez, its tail is very long, and its size is inferior to that of the stare; its plumage is of a glossy black; it flies in numerous flocks, which are destructive to the cultivated fields where they alight; it breeds in the spring, and its flesh is tough and rank. In a word, this bird might be considered as a sort of jackdaw; but, if we except the plumage, a jackdaw with a long tail resembles as much a magpie.

It is quite different with respect to the isana of Fernandez, which Brisson confounds with the Jamaica magpie. The bill, indeed, the feet, and the plumage,

have the same colours in both; but the ifana is larger, and its bill is twice as long: besides, it prefers the coldest parts of Mexico, and in its instincts, its habits, and its cry, it resembles the stare. It would be difficult to trace these characters in the Jamaica magpie of Catesby; and, if it must be referred to the same genus, it ought at least to be formed into a separate species. The ifana has a sort of jeering note, common to most of the birds termed American magpies.

THE MAGPIE OF THE ANTILLES.

THE magpie of the Antilles resembles ours in its cry, in its confident disposition, in its nestling on trees, in its sauntering by the margin of streams, and in the coarseness of its flesh. It differs, however, by the excessive length of the two middle quills of the tail, which stretch six or eight inches beyond the lateral ones; its colours are also different, the bill and feet being red; the neck blue, with a white collar; the head of the same blue, tinged with a white spot, streaked with black, which extends from the origin of the upper mandible to the junction of the neck; the back of a tawny colour, the rump yellow, the two long quills of the tail striped with blue and white, those of the wing mixed with green and blue, and the under side of the body white.

Synonymes.---*Corvus caribæus*, *Gmel.* *Galgulus antillarum*, *Briss.* *Pica cauda Indica*, *Ray.* Persian pie, *Will.* Carribæan crow, *Lath.*

THE MEXICAN PIE.

THOUGH Fernández calls this bird a great stare, we may from his own account, refer it to the genus of magpies; for he tells us, that it would be exactly like the common jackdaw, if it were somewhat smaller, its tail and nails shorter, and its plumage of a purer black, and not mixed with blue. But a long tail is the property, not of the stare, but of the magpie,
and

and what discriminates it the most in its external appearance from the jackdaw. With regard to the other characters which separate this bird from the jackdaw, they are as much foreign to the stare as to the magpie, if not more so.

This bird courts the residence of man; it is as familiar as the magpie, chatters like it, and has a shrill cry; its flesh is black, and very well tasted. The Mexican name is *hocitzanatl*; it is also called *caxcax-tototl*. Specific character: "Entirely of a bluish black." Synonymes.---*Corvus Mexicanus*, Gmel. *Pica Mexicana major*, Briff. Le criard, *Pernetty's* voy. Mexican crow, *Latb.*

THE VARDIOLE MAGPIE.

SEBA has given this bird the appellation of the *bird of Paradise*, as he has to almost all foreign birds with long tails. In this respect the vardiole was entitled to the name, since its tail is double the extreme length of its body. But this tail is not formed as in the bird of paradise, for its quill feathers are furnished with vanes through their whole length, besides many other differences. White is the prevailing colour in this bird: we must only except the head and neck, which are black, with very bright purple reflections; the feet, which are of a light lead colour; the wings, whose quills have black vanes, and the two middle ones of the tail, which stretch much beyond the rest, and which are marked with black along their shaft, from the base to half of their length.

The eyes of the vardiole are lively, and the base of the upper mandible is shaded with little hair-like black feathers, that meet behind and cover the nostrils; its wings are short, and extend not beyond the origin of its tail. So far it resembles the magpie; but it differs on account of the shortness of its feet, which are only the half in proportion, a circumstance attended with other differences in its figure and port. It is found in
the

the island of Papoe, according to Seba, whose description is the only original one, and comprehends all that is known about this bird. It is also called *way-gehoe*, and *wardiboe*.

THE ZANOE MAGPIE.

FERNANDEZ compares this Mexican bird to the common magpie, for its size, for the length of its tail, for the perfection of its senses, for its talents for speaking, and for its proneness to steal whatever pleases its fancy. He adds, that its plumage is entirely black, except on the neck and head, where we can perceive a fulvous tinge. The Mexican name is *tsanaboei*. Specific character: "Blackish, its head and neck somewhat fulvous, its tail long."

Synonymes.---*Corvus-zanahoe*, *Gmel.* *Pica Mexicana minor*, *Briss.* Lesser Mexican crow, *Lath.*

THE JAY.

WHAT we have said with regard to the instinct of the magpie, holds almost entirely in respect to the jay; it will be sufficient, therefore, to notice the characteristic differences. The principal one is the blue spot, or rather mail, formed by various shades of blue with which each of its wings is decorated, and which suffices to distinguish it, at least, from all the other European birds. It has also on its forehead a tuft of small feathers, black, blue, and white: in general its feathers have all a soft and silky feel, and it can at pleasure raise and depress those on its head. It is a fourth part less than the magpie; its tail is shorter, and its wings longer in proportion, but notwithstanding it can scarcely fly better. The male is distinguished by the bulk of his head and the lustre of his colours. The old ones differ also from the young in their plumage, and hence the various inconsistent descriptions.

The jays are of a petulant disposition; they have keen sensations and brisk movements, and in their frequent

quent bursts of rage they hurry into danger, and often entangle their head between two branches, and die thus suspended in the air. When they feel restraint, their violence exceeds bounds; and hence, in a cage, they entirely lose their beauty, by the continual rump-ling, wearing, and breaking, of their feathers. Their ordinary cry is harsh and frequent; they are also fond of imitating other birds whose notes are not more agreeable, such as the kestrel, the tawny owl, &c. If they perceive in the wood a fox or other ravenous animal, they give a certain shrill scream, to alarm their companions; they quickly assemble, presuming that they shall be formidable by their numbers, or at least by their noise. This instinct, which the jays have, of summoning their force, together with their violent antipathy to the brown owl, suggest several ways of ensnaring them, and the sport is commonly very successful; for they are more petulant than the magpies, and by no means so suspicious or crafty: nor is their natural cry so various, though they have great flexibility of throat, and have a turn for imitating all the cries and sounds of animals which they habitually hear, and even human discourse. The word *Richard* they can the most easily imitate. They have also like the magpie, and all the family of the daws, crows, and ravens, the habit of burying their superfluous provisions, and of stealing whatever they can obtain. But they cannot always recognize the spot where they have buried their treasure, or, like all misers, they are more actuated by the fear of encroaching on their stock, than by the desire of using it; so that, in the succeeding spring, the acorns and nuts that were concealed, perhaps forgotten, germinate in the earth, and their tender leaves discover the useless heap, though too late, to the frugal sordid hoarders.

The jays breed in woods remote from human dwellings, preferring the most branchy oaks, whose trunks are entwined with ivy: but they are not so artful and

360 NATURAL HISTORY

cautious as the magpie in building their nests; they are hollow hemispheres, formed with small interwoven roots, open above, without any soft lining, and without any exterior defence. They lay five or six eggs, smaller than pigeons eggs, grey, with more or less of a greenish hue, and with small spots faintly marked. The young undergo their moulting in July, and keep company with their parents till the succeeding spring, when they separate, to form new pairs. By this time the blue plate on their wings, which appears very early, has attained its highest beauty.

In the domestic condition, they become accustomed to all sorts of food, and live in this way eight or ten years. In the state of freedom, they feed not only on acorns and filberts, but on chesnuts, pease, beans, forbs, goosberries, cherries, raspberries, &c. They also prey on the young of other birds, when they can surprise them in the nest during the absence of the parents; and sometimes they venture to attack the old ones, when they discover them entangled in snares; and in this case they advance with their usual imprudence, and are often caught themselves. Their flesh, though not delicate, is eatable, particularly if it be boiled first, and afterwards roasted.

In jays, the first phalanx of the outer toe is in each foot connected with that of the middle toe; the inside of the mouth is black; the tongue of the same colour, forked, thin, membranous, and almost transparent. This bird is found in Sweden, Scotland, England, France, Germany, and Italy; and is a native of every country in Europe, and even of the corresponding climates of Asia.

Another variety, more generally known in this species, is the white jay. It has the blue mark on the wings, but is distinguished from the common jay by the almost universal whiteness of its plumage, which extends even to its bill and nails, and by the red colour of its eyes, a property observed in so many other white animals.

animals. But we must not imagine that this white complexion is entirely pure; it is often shaded with a yellowish tinge of various intensity. The coverts of the wings are the whitest; and its feet are more slender than those of the common jay. Specific character of the jay, *corvus glandarius*, Linn. "The coverts of its wings are sky-blue, with transverse white and black lines, its body ferruginous." It weighs between six and seven ounces, its length is thirteen inches, breadth twenty and a half. It is esteemed one of the most beautiful of the British birds.

Synonymes.---Le geai, Buff. *Corvus glandarius*, Linn. and Gmel. *Garrulus*, Briss. *Pica glandaria*, Gefner, Aldrov and Ray. In Greek, according to Be-lon, *μαλακοκρανεις*; in modern Greek, *καρακαζα*; in Latin, *garrulus*; in Spanish, *gayo*, *cayo*; in Italian, *ghi-andaia*, *gaza verla*, *berta*, *bertina*, *baretino*; in German, *babber*, *batzler*, *baum hatzel* (tree-jay), *eichen-beber* (oak-jay), *nuss-beber* (nut-jay), *nuss-becker* (nut-hedger), *jack*, *broe-kexter*, *maggraff*, *marcolfus*: in Swiss, *berren-vogel*; in Polish, *soyka*; in Swedish, *net-skrika*, *allon-skrika*, *korn-skrika*.

THE RED-BILLED JAY OF CHINA.

THE red bill of this jay is the more remarkable, as the whole of the fore-part of the head, the neck, and even the breast, is of a fine velvet black. The hind part of its head and neck is of a soft grey, which mixes in small spots on the crown with the black of the fore-part; the upper side of the body is brown, the under whitish. But, to form a clear idea of the colours, we must suppose a violet tint spread over them all, except the black, deeper on the wings, fainter on the back, and still more dilute under the belly. The tail is tapered, and the wings exceed not one-third of its length, and each of its quills is marked with three colours, viz. a light violet at its origin, black at its middle, and white at its extremity; but the violet is

more extensive than the black, and that still more than the white.

The feet are red, like the bill; the nails whitish at their origin, and brown near the point, and are, besides, very long and hooked. This jay is somewhat larger than ours, and may be only a variety arising from the influence of climate. Specific character: "The body dusky above, and whitish below; the tail wedge-shaped; the tail-quills dilute violet at the base, black in the middle, and white at the tips." Synonymes.-- *Corvus erythrorhynchos*, *Gmel.* Red-billed jay, *Lath.*

THE PERUVIAN JAY.

The plumage of this bird is of singular beauty; it consists of an assemblage of the finest colours, sometimes melting with inimitable art, and sometimes forming a contrast which heightens the effect. The delicate green which prevails in the upper part of its body, extends on the one side over the six mid quills of the tail, and on the other it advances, passing by insensible shades, and receiving at the same time a bluish tint, to join a sort of white crown on the head. The base of the bill is surrounded with a fine blue, which appears again behind the eye, and in the space below it. A kind of black velvet, which covers the throat and all the fore-part of the neck, is contrasted at its upper margin with the fine blue colour, and at its lower to the jonquil yellow which is spread over the breast, the belly, and the three lateral quills on each side of the tail. The tail is tapered, and more so than the Siberian jay. Synonymes.-- *Le geai du Perou*, *Buff.* *Corvus Peruvianus*, *Gmel.*

THE BROWN CANADA JAY.

IF it were possible to suppose that the jay could migrate into America, we might suppose this a variety of our European species; for it has the appearance

and the port, and also the soft silky feathers, which are conceived to belong peculiarly to the jay. It is distinguished only by its inferior size, by the colours of its plumage, and by the length and shape of its tail, which is tapered. Such slight differences might be ascribed to climate; but our jay is unable to traverse the intervening ocean.

The upper side of the body is of a brown colour; the under side, and also the crown of the head, the throat, and the fore-part of the neck, are of a dirty white, which also appears at the extremity of the tail and wings. Specific character: "It is dusky, the front yellowish, the under-side of the body and the tips of the tail-quills white." It inhabits the northern and western parts of America, breeds early in the spring, and builds its nest with sticks and grass in the pines. It lays two, and rarely three, eggs, which are blue. The young are quite black. They fly in pairs, the male and female being precisely alike. They store up berries in hollow trees; yet they are avaricious, and so bold as to visit the huts of the natives, and pilfer whatever they can snatch, even salted meat. They are seldom seen in the month of January, unless near dwellings.

Synonymes.---*Corvus Canadensis*, *Linna.* and *Gmel.*
Garrulus Canadensis fuscus, *Briss.* Cinereous crow,
Penn. and *Lath.*

THE SIBERIAN JAY.

THE points of analogy between this species and our jay consist in a certain family likeness, and that the shape of the bill and feet, and the position of the nostrils, are nearly the same; and also that the Siberian jay has, like ours, narrow feathers on its head, which it can raise at pleasure as a crest. The discriminating properties are these: it is smaller, its tail is tapered, and the colours of its plumage are very different. Its history is totally unknown. Synonyme ---*Corvus Sibiricus*, *Gmel.*

THE WHITE COIF, OR CAYENNE JAY.

IT is nearly of the size of the common jay, only it is taller, its bill shorter, its tail and wings proportionally longer, which gives it a sprightlier air. There are also other differences, chiefly in the plumage; grey, white, black, and the different shades of violet, constitute all the variety of its colours. The grey appears on the bill, the legs, and the nails; the black on the front, the sides of the head, and the throat; the white round the eyes, on the crown of the head, and on the nape as far as the origin of the neck, and also over all the lower part of the body; the violet lighter on the back and wings, and deeper on the tail, which is tipped with white, and composed of twelve quills, of which the two middle ones are rather longer than those towards the side.

The small black feathers on its front are short, and scarce flexible; part of them project over the nostrils, and the rest are reflected, so as to form a sort of ruffled crest. Specific character: "It is somewhat violet, white below, its neck and front black, its tail white at the tip." It is thirteen inches long. Synonymes. ---*Corvus Cayanus*, Linn. and *Gmel.* *Garrulus Cayanensis*, Briss.

THE YELLOW-BELLIED JAY OF CAYENNE.

THIS also is a native of Cayenne; but of all the jays it is the one which has the shortest wings; we should therefore be the farthest from suspecting that it crossed the Atlantic, especially as it can subsist only in warm climates. Its feet are short and slender. Specific character: "Above, it is dusky-greenish; below, yellow; its chin and eye-lids white; its wings and tail of a duskyblush-colour." It is nine inches long. Synonyme. ---*Corvus flavus*, *Gmel.*

THE



The Blue Jay of North America.

Chas. V. 1798.

Thos. Bewick.



THE BLUE JAY OF NORTH-AMERICA.

THIS bird is admired for the fine blue colour of its plumage, which, with a slight intermixture of white, black, and purple, is spread over all the upper part of its body, from the crown of the head to the extremity of the tail.

Its throat is white, with a tint of red; under it is a kind of black gorget, and still lower a reddish zone, which melts by degrees into the grey and white that predominate in the lower part of the body. The feathers on the crown of the head are long, and the bird raises them at pleasure like a crest, which is larger and more beautiful than in our jay: this is terminated on the front by a kind of black fillet, which stretching on both sides over a white ground as far as the nape, joins the branches of the gorget. This fillet is divided from the bottom of the upper mandible by a white line formed by the small feathers which cover the nostrils. The tail is almost as long as the bird itself, and consists of twelve staged quills.

Catesby remarks, that the American jay has the same petulance in its actions as the common jay; that its notes are less disagreeable, and that the female is distinguished from the male by its duller colours. This jay is brought from Carolina and Canada; and in those countries it must be very common, since many are sent to Europe. Specific character: "The coverts of the wings are marked by black transverse lines, its body is cœrulean, its collar black." It is twelve inches long. It feeds on fruits and berries, of which it generally wastes more than it consumes. It lays, in the month of May, five or six eggs of dusky olive, with ferruginous spots. It remains in the country the whole year. It is well known to sailors by the name of *blue bird*, and frequently brought to Britain from Virginia and the Carolinas.

Synonymes.---*Corvus cristatus*, Linn. and Gmel.
Garrulus

366 NATURAL HISTORY

Garrulus Canadensis cœruleus, *Briss.* *Pica glandaria cristata*, *Klein.* The blue jay, *Catesby*, *Edw. Penn.* and *Latb.*

THE NUTCACKING JAY.

THIS bird is distinguished from the other jays by the shape of its bill, which is straighter, blunter, and composed of two unequal pieces. Its instinct is also different, for it prefers the residence of high mountains, and its disposition is not so much tinged with cunning and suspicion. However, it is closely related to this species of birds; and most authors have ranged it with the jays and magpies, and even with the jackdaws, which, it is well known, bear a great analogy to the magpies; but it is asserted that it chatters more than any other of this extensive genus.

Klein distinguishes two varieties of the nutcracker; the one, speckled like the stare, has a strong angular bill, a long forked tongue, as in all the magpies; the other is of inferior size, and its bill is more slender and rounder, composed of two unequal mandibles, the upper of which is the longer, and its tongue divided deeply, very short, and almost lost in the throat. According to *Willoughby*, the tongue seems not capable of reaching farther than the corners of the mouth, while the bill is closed; because in that situation the cavity of the palate, which usually corresponds to the tongue, is then filled by a protuberant ridge of the lower jaw, which here fits this cavity. He adds, that the bottom of the palate, and the sides of the chaps, are roughened with little points. These two birds eat hazel-nuts; but the former breaks them, and the latter pierces them: they feed also on acorns, wild berries, the kernels of pine-tops, which they pluck dextrously, and even insects. And lastly, like the other jays, the magpies, and the jackdaws, they conceal what they cannot consume.

Besides the brilliancy of the plumage, the nutcracker is remarkable for the triangular white spots which are spread

spread over its whole body, except the head. These spots are smaller on the upper part and broader on the breast; their effect is the greater, as they are contrasted with the brown ground. These birds are most common in Auvergne, Savoy, Lorraine, Franche Comté, Switzerland, the Bergamasque, in Austria in the mountains which are covered with forests of pines. They also occur in Sweden, though only in the southern parts of that country. The people in Germany call them Turkey birds, Italian birds, African birds; which language means no more than that they are foreign.

Though the nutcrackers are not birds of passage, they fly sometimes from the mountains to the plains. Frisch says, that flocks of them are often observed to accompany other birds into different parts of Germany, especially where there are pine forests. But in 1754 great flights of them entered France, particularly Burgundy, where there are few pines; they were so fatigued on their arrival, that they suffered themselves to be caught by the hand. One was killed in the month of October that same year at Mostyn in Flintshire, which was supposed to have come from Germany. We may remark, that that year was exceedingly arid and hot, which must have dried up most of the springs, and have much affected those fruits on which the nutcrackers usually feed. Besides, as on their arrival they seemed to be famished, and were caught by all sorts of baits, it is probable that they were constrained to abandon their retreats for want of subsistence.

One of the reasons, it is said, why the nutcrackers do not settle and breed in the inviting climates, is the perpetual war waged against them by the proprietors of the woods, for the injuries which they commit on the large trees, by piercing the trunks, like the woodpeckers. Part of them is soon destroyed, and the rest is forced to seek an asylum in the desert forests. Nor is this the only circumstance in which they resemble the woodpeckers; they nestle, like them, in the holes of trees,

trees, which, perhaps, they themselves have formed; for the middle quills of the tail are also worn near the end, which shews that they, as well as the woodpeckers, clamber upon trees. In short, nature seems to have placed the nutcrackers between the woodpeckers and the jays; and it is singular, that Willoughby has given them this precise arrangement in his Ornithology, though his description suggests no relation between these species.

The iris is of a hazel-colour; the bill, the feet, and the nails, black; the nostrils round, shaded with whitish feathers, straight, stiff, and projecting; the feathers of the wing and tail are blackish, without spots, but only terminated for the most part with white; though there are some varieties in the different individuals, and in the different descriptions, which seem to confirm the opinion of Klein with regard to the two races or varieties, which he admits into the species of the nutcrackers.

We cannot find, in writers of natural history, any details with regard to their laying, their incubation, the training of their young, the duration of their life, &c. for they haunt inaccessible spots, where they enjoy undisturbed repose. Specific character of the nutcracker, *corvus-caryocatactes*, Linn.---“It is dusky, dotted with white, its wings and tail black; the tail-quills white at the tip, the middle ones worn at the tip.” It is thirteen inches long. It inhabits Europe and the north of Asia, but very seldom appears in Great Britain.

Synonymes.---Le casse-noix, Buff. *Corvus caryocatactes*, Linn. and Gmel. *Nucifraga*, Briss. *Caryocatactes*, Gefner, Ray, and Will. *Merula saxatilis*, Aldrov. This bird was unknown to the Greeks, tho' Gefner has formed a compound Greek name, *καρυοκατακτε*, from *καρύα*, a nut, and *κτενω*, to kill; in Latin it is called *nucifraga*, *ossifragus*; and by some *turda saxatilis*, *pica abietum guttata* (stone-thrush, or speckled pine-magpie);

pie); in Turkish, *garga*; in German, *nuss-bretschel*, *nuskraebe* (nut crow), *tannen beyer* (fir-jay), *stein-beyer*, *wald-starl* (wood-stire), *turkischer-holst-schreyer* (the Turkish forest-brawler); in Polish, *klejk*, *grabulsk*; in Russian, *kostobryz*; in French, *pie grivelée*.

The newly-discovered subjects in this genus, which have not yet appeared in books of ornithology, are as follow: The South-sea raven, *corvus Australis*. New Caledonian crow, *corvus Caledonicus*. Pacific crow, *corvus Pacificus*; from the islands in the Pacific Ocean. Tropic raven, *corvus Tropicus*; from the island Owhyhee. Steller's crow, *corvus Stelleri*; from Nootka Sound. It bears a sort of crest. White-eared jay, *corvus auritus*; from China. Purple-headed jay, *corvus purpurascens*; from China. Macao crow, *corvus sinensis*. Rufous crow, *corvus rufus*; from China. African crow, *corvus Africanus*. It is brown, and somewhat crested.

CORACIAS, THE ROLLER.

THIS genus contains seventeen species, besides varieties; they are dispersed over the whole globe, and are remarkable for their short legs. This tribe is nearly related to the crows, and hence stiled by Linnaeus, *coracias*, a word applied by Aristotle to what is now known by the name of the chough, or Cornish crow. Their distinguishing characters are as follow: Bill knife-shaped, curved at the tip, bare of feathers at the base. Tongue cartilaginous and bifid. Feet ambulatory.

THE GARRULOUS ROLLER.

THE names of *Strasburg jay*, *sea-magpie*, *birch-magpie*, and *German parrot*, which this bird has received in different countries, have been applied at random from popular and superficial analogies. We need only view the bird, or even a good coloured figure of it, to be convinced that it is not a parrot, though there

is a mixture of green and blue in its plumage; and a closer examination will inform us that it is neither a magpie nor a jay, though it chatters incessantly like these birds. Its appearance and port are different; its bill is not so thick; its legs much shorter in proportion, shorter even than the mid-toe; its wings longer, and its tail entirely of a different shape, the two outer quills projecting more than half an inch (at least in some individuals) beyond the six intermediate ones, which are all equal in length. It has also a kind of wart behind the eye, and the eye itself is surrounded with a ring of yellow naked skin. It is a bird of passage, and performs its migrations regularly once a year, in the months of May and September. It is found in Sweden and in Africa; but we must not suppose it settled in the intermediate regions. It is unknown in many parts of Germany, France, and Switzerland, &c. We may therefore conclude that, in its passage, it moves only in a narrow zone, from Smoland and Scania to Africa. There are points given to mark nearly its tract through Saxony, Franconia, Suabia, Bavaria, Tirol, Italy, Sicily, and, lastly, the island of Malta, which is a sort of general rendezvous for all the birds that cross the Mediterranean. The one described by Edwards was killed on the rock of Gibraltar, whence it could wing its lofty course to the African shore. It is seen sometimes in the vicinity of Strasbourg, and even in Lorraine, and in the heart of France; but these are probably young ones, which stray from the main body.

The roller is more wild than the jay or the magpie: it settles in the thickest and the most solitary woods; nor has it ever been tamed or taught to speak. Its plumage is beautiful; it has an assemblage of the finest shades of blue and green, mixed with white, and heightened by the contrast of dusky colours. But a good figure is superior to any description. The young do not assume the delicate azure till the second year; whereas



Edward del.

The Garrulous Roller.
Published Nov. 1. 1798.

J. H. sculp.



whereas the jays are decorated with their most beautiful feathers before they leave the nest. The rollers build, when it is in their power, on birches; and it is only when they cannot find these that they make use of other trees. But in countries where wood is scarce, as in the island of Malta and in Africa, they form their nest, it is said, on the ground. If this be a fact, it would follow, that the instincts of animals can be modified by situation, climate, &c. These birds are often seen in company with the wood-peckers and crows, in the tilled grounds near the forests. They pick up the small seeds, roots, and worms, which the plow throws to the surface, and even the grain that is lately sown. When this supply fails them, they have recourse to wild berries, caterpillars, grasshoppers, and even frogs. Schwenckfeld adds, that they sometimes devour carrion; but this must be during winter, and only in cases of absolute want; for they are in general regarded as not carnivorous, and Schwenckfeld himself remarks that they are very fat in autumn, and then are good eating, which can hardly be said of birds that feed on flesh.

The roller has long narrow nostrils placed obliquely on the bill near its base, and open; the tongue is black, ragged at the tip, and terminated towards the root by two forked appendices, one on each side. The wings extend twenty-two inches, each consisting of twenty quills, or, according to others, of twenty-three, the second of which is the longest of all; and it is observed, that wherever these quills are black on the outside, they are blue beneath.

Aldrovandus, who seems to have been very well acquainted with these birds, and who lived in a country which they inhabit, asserts that the female differs much from the male, its bill being thicker, and its head, neck, breast, and belly, of a chestnut colour, bordering on ash-grey, while the corresponding parts in the male are of the colour of the beryl, with different reflec-

372 NATURAL HISTORY

tions of a duller green. It is very probable that the two long outside quills of the tail, and the warts behind the eyes, which appear only in some individuals, are the attributes of the male, as the spur in the gallinaceous tribe, the long tail in the peacocks, &c.

Specific character of the garrulous-roller, *coracias-garrula*, Linn.---“It is sky-blue, its back red, its tail-quills black.” Its eggs are of a pale green, with numerous dull spots, and of the bulk of a pigeon’s. It is very seldom seen in Great Britain.

Synonymes.---Le rolhier d’Europe, *Buff.* *Coracias-garrula*, Linn. and *Gmel.* *Galgulus*, *Briss.* *Coracias-cœrulea*, *Gerini.* *Garrulus cœruleus*, *Frisch.* In German, *galgen-regel*, *balk-regel*, *gals-kregel*, *racher*; in Polish, *kraska*; in Swedish, *spanisk-kraska*. It has also the following names in Germany: *beiden-elster*, *kugel-elster*, *mandel-krae*, *deutscher-papagey*, *birk-beber*; i. e. heath-magpie, ball-magpie, almond-crow, German popinjay, birch-jay.

THE ABYSSINIAN ROLLER.

THIS bird is, in its plumage, much like the European roller; only its colours are more lively and brilliant, which must be ascribed to the influence of a drier and hotter climate. On the other hand, it resembles the Angola roller, by the length of the two side feathers of its tail, which project five inches beyond the rest. The point of its upper mandible is very hooked. Synonyme.---*Coracias Abyssinica*, *Gmel.*

The Senegal roller may be considered as a variety of that of Abyssinia. The chief difference between them is, that in the Abyssinian bird the orange colour of the back does not extend, as in that of Senegal, so far as the neck and the hind part of the head: a difference which would not be sufficient to constitute two distinct species, especially as they belong to nearly the same climate, as the two lateral quills are double the length of the intermediate ones, as in both the wings

wings are shorter than those of the European roller; and lastly, as they are alike in the shades, the lustre, and the distribution, of their colours. This is the *coracias senegalensis* of Gmelin, the *swallow-tailed Indian roller* of Edwards, the *Senegal roller* of Latham, and the *shaga-rag* of Dr. Shaw.

THE ANGOLA ROLLER, AND THE MINDANAO ROLLER.

THESE two rollers resemble each other so exactly, that it is difficult to separate them. That of Angola is distinguished from the other only by the length of the exterior quills of its tail, which is double that of the intermediate ones, and by slight variations of colour. They are both nearly of the bulk of the European roller, have the same general shape, its bill somewhat hooked, its naked nostrils, its short legs, its long toes, its long wings, and even the colours of its plumage, though differently distributed: they are always blue, green, and brown, which are sometimes distinct, sometimes mixed, melted together, forming many intermediate shades, and having various reflections. The bluish green, or sea green, is however spread on the crown of the head; the brown, more or less intense, and more or less greenish, covers all the fore-part of the body, with some tints of violet on the throat; and the blue, the green, and all the shades which arise from their mixture, appear on the rump, the tail, the wings, and the belly: only the Mindanao roller has under its breast a kind of orange tincture, which is not found in that of Angola.

To this opinion it will be objected, perhaps, that the kingdom of Angola is at a great distance from Bengal, and still farther from the Phillippines. But is it impossible, or is it not natural, that these birds should be spread through the different parts of the same continent, or the neighbouring islands, which are connected with it perhaps by the continuation of the

the same chain, especially in climates so nearly alike? Besides, we cannot always expect the most scrupulous exactness in those who import the productions of foreign countries; and the intercourse of European vessels with the various regions of the globe is so extensive and multiplied, that a bird found in the East Indies might have been carried to Guinea, and afterwards imported as a native of Africa. But, should we ascribe the slight differences between the roller of Mindanao and that of Angola to the effect of age, we must reckon the latter the older; or, if we impute them to the distinctions of sex, we must consider it as the male: for we know that in the rollers, the fine colours of the feathers do not appear till the second year; and it is a general principle, that in all birds, the male, when it differs from the female, is distinguished by an exuberance of growth, or a superior richness of plumage. Specific character of the Angola roller, which is the *coracias-caudata* of Linnæus, and the *long-tailed roller* of Latham:---“It is somewhat fulvous; below, cœrulean; the neck striated below with pale violet; the outmost quills of the tail very long.”

Specific character of the Mindanao roller, which is the *coracias-bengalensis* of Gmelin; the *Bengal pie*, or *jay*, of Albin; and the *Bengal roller* of Latham:---“It is somewhat fulvous; below, cœrulean; the neck striated beneath with pale violet; the tail entire.”

THE ORIENTAL ROLLER.

THIS bird differs less from the preceding in the nature of its colours, which are always blue, green, brown, &c. than in the order of their distribution; but in general its plumage is more dusky, its bill is also broader at the base, more hooked, and of a yellow colour: and of all the rollers it has the longest wings. Specific character:---“It is green, its throat striated with cœrulean: its tail-quills black at the tip. It is of the bulk of the jay, being ten inches and a half long.”

Synonymes.--

Synonymes.---*Coracias orientalis*, *Gmel.* *Galgulus Indicus*, *Briff.* Oriental roller, *Latb.*

THE MADAGASCAR ROLLER.

THIS species differs from all the preceding in several properties: its bill is thicker at the base, its eyes are larger, its wings and tail longer, though the exterior quills of the latter do not project beyond the rest: the plumage is of an uniform purple-brown, excepting only that the bill is yellow, the largest quills of the wings black, the lower belly of a light blue, the tail of the same colour, edged at its extremity with a bar of three shades, viz. purple, light blue, and dark purple approaching to black. It has all the other characters which belong to the rollers; short feet, the edges of the upper mandible scalloped near the point, the small feathers which reflect from its base, and the naked nostrils, &c. Synonymes.---*Coracias Madagascariensis*, *Gmel.*

THE MEXICAN ROLLER.

THIS is the Mexican black-bird of Seba. The colours are different from those which are common in the other rollers. The upper part of the body is of a dull grey, mixed with a rufous tint, and the under of a light grey, with some marks of fire-colour. Specific character:---“It is of a grey-rufous; below, and on the wings, of a dilute grey, mixed with flame-colour.” It is much larger than a thrush. Synonymes.---*Coracias Mexicanus*, *Gmel.* *Galgulus Mexicanus*, *Briff.*

THE CHINESE ROLLER.

THIS bird has wide nostrils, and a bill resembling the other rollers; but its feet are longer, its wings shorter, and consist of a smaller number of quills: its tail is tapered, and its crest is very like that of the blue Canada jay. In the Chinese roller, the wing consists of eighteen quills, of which the first is very short,

short, and the fifth longer than the rest, as in the jay; whereas the wing of the other rollers includes twenty-three quills, of which the second is the longest. Specific character:---“It is green; below, yellowish-white; the tail wedge-shaped; the tip white.” It is eleven inches and a half long. Synonymes.---*Coracias sinensis*, *Gmel.*, *Galgalus sinensis*, *Briss.* Chinese roller, *Lath.*

THE CAYENNE ROLLER.

THIS bird, in the opinion of the Count de Buffon, ought not to be separated from the preceding, which it is entirely like, except because it is smaller, and the colours of its plumage different. With regard to the instincts and habits of these birds, we can draw no comparison, though the resemblance in their exterior properties seems to denote a radical connection. Specific character:---“It is of a dusky green; below, dirty white; the eye-brows white; the upper part of the throat striated both ways with black; the tail wedge-shaped. It is nine inches long. Synonymes.---*Coracias Cayanensis*, *Gmel.* Cayenne roller, *Lath.*

The new species of rollers which have recently been discovered, are as follow: The Indian roller, *coracias Indica*; from Ceylon. Cape roller, *coracia caffra*. Ultramarine roller, *coracias cyanea*. Fairy roller, *coracias puella*; from India. Blue-striped roller, *coracias striata*; from New Caledonia. Grey-tailed roller, *coracias vagabunda*; from India. Docile roller, *coracias docilis*; from the South of Asia. Black roller, *coracias nigra*. African roller, *coracias Afra*. Black-headed roller, *coracias melanocephala*; from China. Obstreperous roller, *coracias strepera*. It is black; the spot on its wings, its vent, and the base and tip of its tail, white. It is very numerous in Norfolk island: is a silly bird, noisy and restless during the night.

ORIOIUS,

ORIOBUS, the ORIOLE.

THIS genus of birds contains fifty-two species, besides several varieties. Their generic characters are: Bill conical, convex, very sharp, and strait; the upper mandible somewhat longest, and slightly notched; tongue bifid and sharp; feet ambulatory.--- These birds are found chiefly in America; many of the species are migratory, and have pendulous nests; they are numerous, and gregarious; noisy and voracious, subsisting on grain. The orioles are generally of a very social disposition. Love, which separates so many other animals into pairs, in order to propagate their kind, and fulfil the desires of nature, serves only to strengthen the bonds of their union. A great number of pairs of some of the species are often seen upon the same tree, nestling, hatching, and educating their young together. They always choose one of the tallest trees for constructing their nests, which are of a cylindrical form, suspended from the extremity of the highest branches, and floating in the air. The young are thus in continual motion, as if rocked in a cradle. A traveller who walks into the forests of those countries, among the first strange objects that excite his curiosity, is struck with the number of birds nests hanging at the extremity of almost every branch. The whole history of nature does not, perhaps, afford an example of a more ingenious and successful precaution than that of these birds, against those animals by which they are surrounded, and which are hostile to their kind. In well-peopled and cultivated parts of the world, where the feathered race have more to fear from man, they generally avoid this formidable foe, by cautiously concealing their habitations from his sight. But, in those solitary and extensive forests of the New World, where man is seldom seen, the bird hangs its nest up to general view, and is only solicitous that it be beyond the reach of those voracious animals

who live by robbery or surprise. With this view the nest is attached to the depending points of the large branches of the banana or plantain trees; where the monkey and serpent are set at defiance. On one of these immense trees, says Goldsmith, is seen the most various and the most inimical assemblage of creatures that can be imagined. The top is inhabited by monkeys of peculiar fierceness, that drive off all others; lower down, numbers of large snakes twine about the vast trunk, patiently waiting till some ill-fated animal come within the sphere of their activity; and, at the extremities of the branches hang the dangling nests of the oriole, and other tribes of birds, whose delightful plumage is variegated with the most exquisite strokes of nature's pencil.

THE GOLDEN ORIOLE.

THE golden oriole is a roving bird, frequently changing its abode. The pair build their nest on lofty trees, and form it with singular industry. They fasten to the fork of a small branch long straws or hemp-stalks; some of which, extending directly across, form the margin of the nest; others penetrate through its texture; while others, bending under it, give solidity to the structure. The nest is thus provided with an exterior cover, and the inner bed, prepared for receiving the eggs, is a matting of the small stems of dog-grass, the beards of which are so much concealed that the nest has often been supposed to be lined with the roots of plants. The interstices between the outer and inner case are filled with moss, lichens, and other such substances, which compact the whole. After the nest is constructed, the female drops in it four or five eggs, the ground colour of which is a dirty white, sprinkled with small distinct spots of brown, most numerous on the small end. She sits closely three weeks, and not only retains long her affection to her young, but defends them against their enemies, and even
against



The Golden Oriole.

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J. Fels sculp.



against man, with singular intrepidity. The parents have been seen to dart resolutely upon the plunderers of their brood; and what is still more remarkable, a mother taken with her nest continued her attempts to hatch in the cage, and expired on her eggs. After the young are reared, and have acquired sufficient strength of wing, the family prepares for its journey. This commonly happens in the end of August, or the beginning of September. Though they fly rather heavily, they probably winter in Africa: for they have been seen to pass the island of Malta in the month of September, and repass it in the spring; and Thevenot says, that they migrate into Egypt in the month of May, and return in September. He adds, that in May they are very fat, and their flesh good eating.

The golden oriole is in length about nine or ten inches, its alar extent sixteen, its tail three and a half long, and its bill fourteen lines. The male is of a fine yellow over all the body, the neck, and head, except a black streak which stretches from the eye to the corner of the aperture of the bill, and under the throat. The wings are black at the joints; and the tail is divided by yellow and black. But the plumage is very different in the two sexes. Almost all that was of a pure black in the male, is, in the female, of a brown, with a greenish tinge; and what was of a beautiful yellow in the former, is in the latter olive and pale brown: olive on the head, and the upper part of the body dirty white, variegated with brown streaks under the body, white at the tips of most of the wing-quills, and pale yellow at the extremity of their coverts; and there is no pure yellow, except at the end of the tail and on the lower coverts. The young males resemble the females with respect to plumage, and the more so the tenderer their age. At first they are still more speckled than the female, and even on the upper part of the body; but in the month of August the yellow begins to appear under the body.

380 NATURAL HISTORY

Their cry is different also from that of the old ones; succeeded sometimes with a sort of mewling; but they have also a sort of whistling, especially before rain.

Their iris is red, the bill brown, the inside of the bill reddish, the edges of the lower mandible somewhat arched lengthwise, the tongue forked, and, as it were jagged at the tip; and the first *phalanx* of the outer toe glued to that of the middle toe. When they arrive in the spring, they feed on grain, caterpillars, worms, insects, whatever in short they can catch; but they are fondest of cherries, figs, the berries of the service tree, pease, &c. A couple of these birds could in one day completely plunder a rich cherry-tree; for they peck the cherries one after another, and only eat the ripe part. These birds have sometimes spread from one end of the continent to another, without suffering any alteration in their external form, or in their plumage; for they have been seen in Bengal, and even in China, precisely alike. But others have been brought from nearly the same countries, which had some differences in their colours, and which may be regarded, for the most part, as varieties of climate, till more accurate observations of their instincts, their habits, and manner of life, shall throw more light on our conjectures. Specific character of the *golden oriole*:---“It is yellow, its straps and joints are black, its outer tail-quills yellow on the top, black under. It seldom or never visits England.”

Synonymes.---*Oriolus galbula*, Linn. and Gmel. *Oriolus*, Briss. *Galbula*, Ray and Will. *Turdus luteus*, Frisch. *Turdus aureus*, Klein. Witwall, Will. Yellow-bird from Bengal, Alb. Golden oriole, Penn. and Latb. In Greek, *χλωριον*, from its greenish yellow colour; the female *χλωρις*, according to Ælian; in modern Greek, *συκοφαγος*, or fig-eater; in Latin it has also the names *chlorion* and *chloris*, besides *chloreus*, *oriolus*; *merula aurea*, *turdus aureus*, *luteus*, *lutea*, *luteolus*, *ales luridus*, *picus nidum suspendens*, *avis iſterus*, *galgalus*;

galgalus; and Pliny applies these four names, *galbulus*, *galbula*, *vireo*, *vineo*; in Italian, *oriolo*, *regalbulo*, *gualbedro*, *galbero*, *reigalbero*, *garbella*, *rigeyo*, *melziozallo*, *becquafio*, *brusola*; in Spanish, *oropendula*, *oroyendola*; in German, *bierholdt*, *bierolf*, *brouder-berolft*, *byrolt*, *tyrolt*, *kirschholdt*, *gerolft*, *kerfenrife*, *goldamsel*, *goldmerle*, *gut-merle*, *olimerle*, *gelbling*, *widdewal*, *wital*; in Swiss, *wittewalch*. The name *oriole* is derived from the Latin *aureolus*, or golden.

THE CHINESE ORIOLE.

THIS bird is brought from Cochin-China: it is perhaps rather larger than the preceding; its bill is also proportionably stronger; the colours of the plumage are precisely the same, and every where distributed in a similar manner, except on the coverts of the wings, which are entirely yellow, and on the head, where there is a sort of black horse-shoe, of which the convex part bounds the occiput, and its branches, passing below the eye, terminate in the corners of the opening of the bill. This is the most remarkable distinction of the Chinese oriole; yet there are some specimens of this bird in which the upper part of the body is of a brown yellow. In all, the bill is yellowish, and the legs black. Specific character of the *oriolus Chinenfis*: ---“It is yellow, the joints black, but yellow at the tips, a black stripe on the back of the head.” Latham reckons it a variety. Synonymes. ---*Oriolus Chinenfis*, Linn. and Gmel. *Oriolus Cochinenfis*, Briss.

THE BENGAL ORIOLE.

THIS is somewhat less than the former, but is nearly of the same proportions and colours, though differently disposed. The head hath a rich purple gloss; the throat, and the fore-part of the neck, are entirely black, and in the tail there is no black, except a broad stripe, which crosses the two intermediate quills near their extremity, and two spots placed very near the tips
of

382 NATURAL HISTORY

of the two following quills. Most of the coverts of the wings are yellow, the others are parted with black and yellow; the largest quills are black where they are seen when the wings are closed, and the others are edged or tipped with yellow; all the rest of the plumage is of the finest yellow.

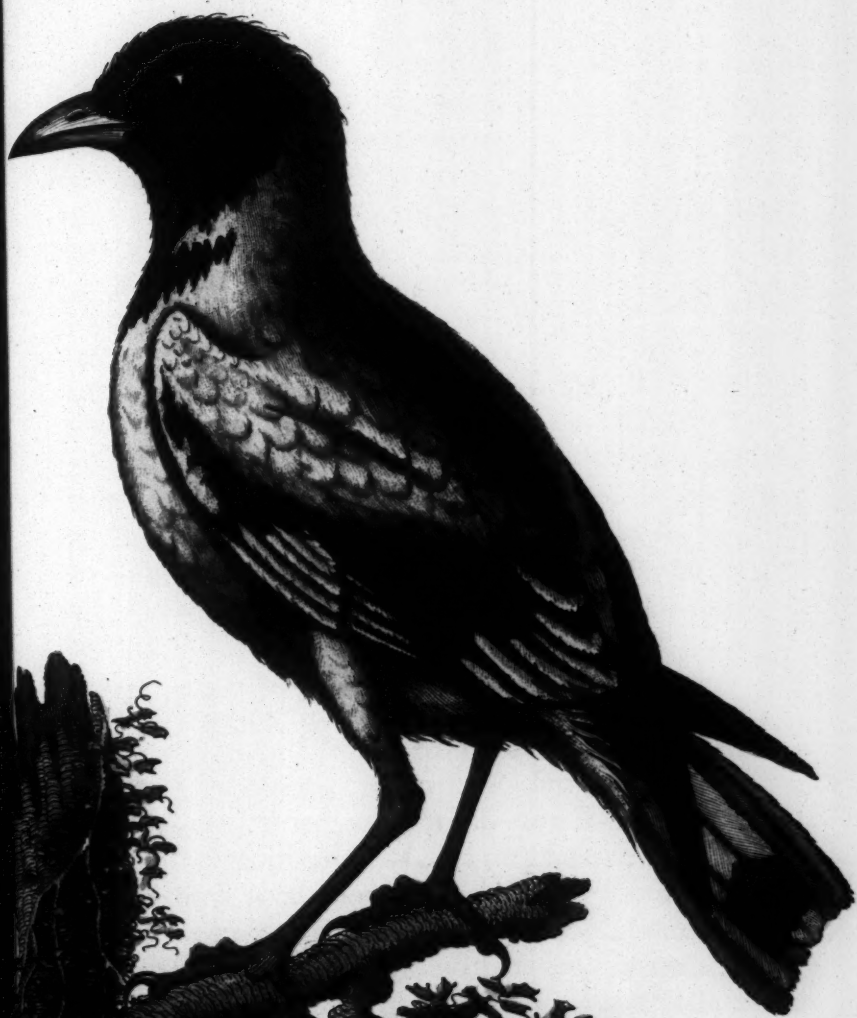
The female is different; and the front or space between the eye and the bill is of a vivid yellow, the throat and the fore-part of the neck of a light yellowish cast, with brown speckles; the rest of the under part of the body is of a deeper yellow, the upper of a shining yellow; all the wings variegated with brown and yellow, the tail also yellow, except the two mid-quills, which are brown, marked with a yellowish spangle, and tipped with yellow. Synonymes.-- *Oriolus melanocephalus*, *Gmel.* *Sturnus luteolus*, *Linn.* *Oriolus Bengalensis*, *Briss.* Black-headed Indian icterus, *Edw.* The female is thus described by the following authors.---*Oriolus galbula*, *var. 1. Gmel.* *Icterus mederaspatanus naevius*, *Briss.* Mottled jay, *Ray.* Yellow starling from Bengal, *Alb.* Yellow Indian starling, *Edw.*

THE INDIAN ORIOLE

HAS more yellow than any of the orioles, for it is entirely of that colour, except, 1. A horse-shoe, which bends round the crown of the head, and terminates on each side in the corners of the bill. 2. Some longitudinal spots on the coverts of the wings. 3. A belt which crosses the tail near the middle; the whole of an azure colour, but the bill and legs are of a glowing bright red. Synonymes.---*Oriolus galbula*, *var. 2. Gmel.* *Oriolus Indicus*, *Briss.* *Chloris Indicus*, *Aldr.*

THE ICTERIC ORIOLE.

BRISSON gave this bird the Latin name *icterus*, from its yellow colour; for the same reason Scopoli termed it *xanthornus*, or yellow bird; other authors have called



The Bengal Oriole.

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called it *pica*, *cissa*, *picus*, and *turdus*. The savages of Brazil name it *guira-tangeima*; those of Guiana *yapou*; the French colonists *cul-jaune*, or yellow-bottom. The most obvious features in the exterior appearance of this bird are its long pointed bill, the narrow feathers of its neck, and the great variety of its plumage: not only three colours enter into it, an orange-yellow, black, and white, but these colours seem to multiply by their artful distribution. The black is spread over the head, the anterior part of the neck, the middle of the back, the tail and the wings; the orange-yellow occupies the intervals, and all the under part of the body; it appears also in the iris, and on the anterior part of the wings; the black which prevails through the rest is interrupted by two oblong white spots, of which the one is placed at the coverts of the wings, the other on their middle quills. The feet and nails are sometimes black, sometimes of a lead colour. The bill seems to have no constant colour, for it has been observed to be in some white grey, in others brown cinereous above, and blue below; and in others black above, and brown below.

This bird is nine or ten inches long from the point of the bill to the end of the tail; and, according to Marcgrave, its wings extend fourteen inches, and its head is very small. It is dispersed through the region lying between Carolina and Brazil, and through the Caribbean islands. It is of the bulk of a blackbird; it hops like the magpie, and has many of its gestures, according to Sloane. It has even, according to Marcgrave, the same cries; but Albin asserts that in all its actions it resembles the stare; and adds, that sometimes four or five unite to attack a larger bird, which, after they have killed, they devour orderly, each maintaining his rank. Specific character of the *oriolus iætericus*: ---“Fulvous; the head, throat, back, the wing-quills, and coverts, black, with a white spot on the wings.”

384 NATURAL HISTORY

Synonymes.---*Oriolus ictericus*, *Gmel.* *Icterus*, *Briss.* *Coracias xanthornus*, *Scop.* Yellow and black pye, *Catesby.* Banana bird from Jamaica, *Albin.* *Icteric oriole*, *Latb.*

THE MEXICAN ORIOLE.

THIS species hath a long yellow bill; its head is all black, and also its throat; the tail and wings are blackish, ornamented with small feathers of a golden colour, which have a fine effect on the dark ground. Seba reckons it a South American bird, and Brissou subjoins that it is most common in Mexico. Specific character of the *oriolus N. Hispaniæ*:---“Yellow; the head, upper part of the throat, wing-quills, and tail, black; the greater quills of the wings yellow at the tip, the lesser all black.” Synonymes.---*Oriolus Novæ Hispaniæ*, *Gmel.* *Icterus Mexicanus*, *Briss.* The Mexican oriole, *Latb.*

THE RING-TAILED ORIOLE.

THIS bird is called the ring-tail (*arc-en-queue*), on account of a black arch or crescent with its concavity turned towards the head, which appears distinctly on the tail when spread, and the more remarkable, as this is of a fine yellow colour, which is also that of the bill and of the whole body; the head and neck are black, and the wings of the same colour, with a slight tint of yellow. Seba received many of these birds from America, where they are looked upon as ravenous. Specific character of the *oriolus annulatus*:---“Yellow; the head and neck black, the greater coverts of the wings and their quills edged with yellowish; the tail blackish and tinged.”

Synonymes.---*L'Arc-en queue*, *Buff.* *Oriolus annulatus*, *Gmel.* *Icterus cauda annulata*, *Briss.* *Cor-nix flava*, *Klein.*

THE JAPACANI ORIOLE.

THE japacani has a long pointed black bill, a little curved; its head is blackish, its iris of a gold colour; the hind part of its neck, its back, its wings, and its rump, are variegated with black and light brown; its tail is blackish below, and marked with white above; its breast, its belly, its legs, are variegated with yellow and white, with blackish transverse lines; its feet brown, its nails black and pointed. Specific character of the japacani:---“It is black and dusky, below variegated with white and yellow, with transverse black lines, the head and tail blackish.” Specific character of Sloane’s little bird:---“It is yellow, the breast spotted, the head and back marked by soft dusky spots, the belly white, the tail and wings dusky, and the latter white at the tips.” Synonymes.---*Oriolus japacani*, *Gmel.* *Luscinia pullo-lutea*, *Klein.*

THE BRASILIAN ORIOLE.

THIS little bird has a round bill, almost straight, and half an inch long; the head and back are of a light brown, with some black spots; the tail eighteen inches long, and of a brown colour, as also the wings, which have a little white at their tips. The orbits, the throat, the sides of the neck, the coverts of the tail, yellow; the breast of the same colour, but with brown marks; the belly white; the legs brown, about fifteen lines long, and yellow in the toes. This bird is common in St. Jago, once the capital of Jamaica; it lodges generally in the bushes. Its stomach is very muscular, and lined with a thin, loose, insensible, membrane. Synonymes.-- *Oriolus Brasilianus*, *Gmel.* *Icterus Brasilensis*, *Briss.* *Muscicapa e fusco et luteo varia*, *Sloane.* Brazilian oriole, *Lath.*

THE NEW SPAIN ORIOLE.

THIS bird is nearly the size of a sparrow; its warble is pleasant; the yellow is mingled with other colours that variegate the whole plumage; and they are an agreeable food. This species resembles in two circumstances the former; it lives upon insects and seeds, and hangs its nest from the ends of small branches. Synonymes.---*Oriolus costototl*, *Gmel.* New Spain oriole, *Lath.*

THE CINEREOUS ORIOLE.

FERNANDEZ considered this bird as a woodpecker, on account of its long and pointed bill; but this character belongs also to the orioles. It is of the bulk of a stare; lives in the woods, and nestles on trees. Its plumage is beautifully variegated with yellow and black, excepting the back, the belly, and the feet, which are cinereous. It is destitute of song, but its flesh is good; it inhabits Mexico. Specific character of the *oriolus cinereus*:---“It is variegated with yellow and black; its back, thighs, and belly, cinereous.” Synonymes.---*Oriolus cinereus*, *Gmel.* *Icterus cinereus*, *Briss.* The grey oriole, *Lath.*

THE RED-WINGED ORIOLE.

THIS bird is distinguished by a fine red mark on the anterior part of its wings, which is the more striking, as it is thrown upon a ground of shining glossy black; for that is the general colour not only of its plumage, but of its bill, feet, and nails. There are, however, some slight exceptions; the iris is white, and the base of the bill is encircled by a narrow ring of red; the bill also inclines sometimes to brown rather than black. But the real colour of the mark on the wings is not a pure red, according to Fernandez, but is tarnished with a rufous tint, which increases and becomes at last the predominant colour. These some-
times

times separate, the red occupying the anterior and the more elevated part of the spot; yellow, the posterior and lower. It is nearly of the size and shape of the flare; its extreme length is eight or nine inches, and its alar extent thirteen or fourteen; it weighs three ounces and a half.

These birds inhabit the cold as well as the warm countries: they are found in Virginia, Carolina, Louisiana, Mexico, &c. They are peculiar to the New World, though one was killed in the environs of London; but this had doubtless escaped from its cage. They can be easily tamed, and taught to speak; and they are fond of singing and playing, whether they be confined, or allowed to run through the house; for they are very familiar and lively. The one killed near London was opened; in its stomach were found caterpillars, beetles, and maggots. But in America they feed on wheat, maize, &c. and are very destructive.

Catesby informs us, that in Carolina and Virginia they always breed among the rushes; they interweave the points of these so as to form a sort of roof or shed, under which they build their nest, and at so proper a height that it can never be reached by the highest floods. This construction is very different from that of the other orioles, and shews a different instinct, and therefore proves that it is a distinct species. They appear in Louisiana in the winter only, but they are then so numerous that three hundred have been sometimes caught in a single draw of the net. For this purpose is used a long and very narrow net of silk, in two parts, like that for larks. "When they intend to spread it," says Le Page Dupratz, "they clear a place near the wood, and make a kind of path, which is smooth and beaten, on which they strew a train of rice or other grain, and retire to conceal themselves behind a bush where the drag-cord is brought. When the flocks of red-wings pass over the spot, they quickly descry the
bait,

388 NATURAL HISTORY

bait, alight, and are caught in an instant." Specific character of the *oriolus phœniceus* :--- "It is black, the coverts of the wing fulvous." In North America it is sometimes called the *swamp black-bird*. They appear in New-York about April, and retire in October to the south. In some of the colonies a premium of three-pence the dozen was offered for destroying them; and several farmers had the precaution to steep their Indian corn in a decoction of white hellebore before they sowed it. Their nest is suspended among the bushes and reeds in sequestered swamps; it is strong, covered externally with plastered broad grass, and lined thickly with bent. The eggs are white, with scattered black streaks. Synonymes.---*Oriolus phœniceus*, *Linn.* and *Gmel.* *Icterus pterophœniceus*, *Briss.* Scarlet-feathered Indian bird, *Will.* Red-winged starling, *Catesby*, *Alb.* and *Kalm.* Red-winged oriole, *Penn.* and *Lath.*

THE BLACK ORIOLE.

THE dark colour of this bird has procured it the names of crow, blackbird, and daw.---But this is not so deep nor so uniform as has been alleged; the plumage in certain positions is of a black, changing with greenish reflections, especially on the head, the upper part of the body, the tail, and the wings. It is about ten inches long, and fifteen or sixteen across the wings, which when closed reach to the middle of the tail; this is four inches and a half in length, tapered, and consisting of twelve quills. The bill is more than an inch, and the mid-toe is longer than the leg. This bird is found in St. Domingo, and is very common in some parts of Jamaica, particularly between Spanish-town and Passage-fort. Its stomach is muscular, and generally contains caterpillars and other insects. Specific character of the *oriolus niger* is, "that it is entirely black." It inhabits also the whole extent of North America. They arrive at Hudson's Bay in June,

June, and sing sweetly till their incubation, during which they only made a sort of chuckling. They build their nests with grass and moss, on trees at the height of eight feet. Their eggs are five in number, dusky, and spotted with black. After hatching, they resume their warble; and collect in vast flocks to retire in September.

Synonymes.---*Oriolus niger*, *Gmel.* *Icterus niger*, *Briss.* *Cornix parva profunde nigra*, *Klein.* Black oriole, *Penn.* and *Lath.*

THE LITTLE BLACK ORIOLE.

THIS is much smaller than the preceding; it is six or seven inches long, and its tail, which is square, only two inches and a half, and extends an inch beyond the wings. The plumage is entirely black, but more glossy and floating, with bluish reflections on the head and the contiguous parts. It is said that this bird can be easily tamed, and taught to live familiarly in the house. Specific character of the *oriolus minor*:---“It is black, the dark colour of the head is mingled with cœrulean.” Synonymes.---*Oriolus minor*, *Gmel.* Lesser black oriole, *Lath.*

THE BLACK-CAPPED ORIOLE.

THE plumage of this bird is of a fine yellow, with a black cap and mantle. The tail is of the same colour, and spotless; but the black on the wings is somewhat interrupted by the white which borders the coverts, and again appears on the tips of the quills. Its bill is of a light grey, with an orange tinge; and the legs are chestnut. It is found at Mexico, and in the island of Cayenne. Specific character of the *oriolus Mexicanus*: “It is blackish; the upper side and the head yellow.” Synonymes.---*Troupiale à calotte noire*, *Buff.* *Oriolus Mexicanus*, *Gmelin.* Black-crowned oriole, *Latham.*

THE

THE SPOTTED ORIOLE.

THE spots which occur in this species are owing to this circumstance, that almost all the feathers, which are brown or blackish in the middle, are edged with yellow, more or less inclined to orange on the wings, the tail, and the lower part of the body. The throat is of a pure white; a streak of the same colour, which passes close under the eye, stretches back between two parallel black streaks, one of which accompanies the white above, and the other bends round the eye below; the iris is of a bright orange, almost red. All these give a lively appearance to the male; for though the iris is orange also in the female, its plumage is of a tarnished yellow, which, mingling with a pale white, produces an unpleasant uniformity. The bill is thick and pointed, and cinereous; the legs are flesh-coloured.

Specific character of the *oriolus melancholicus*: "It is grey, dotted with black, with a white stripe on the eyes." Latham considers the spotted oriole as a variety of this bird. Synonymes.---*Oriolus melancholicus*, Linn. and Gmel. *Anthornus Nævius*, Briss. Scomburger, Edw. and Lath.

THE OLIVE ORIOLE OF CAYENNE.

THIS bird is only six or seven inches long. It owes its name to the olive colour which prevails on the hind-part of its neck, its back, its tail, its belly, and the coverts of its wings. But this colour is not uniform; it is darker on the neck, the back, and the adjacent coverts of the wings, and somewhat less so on the tail; it is much lighter under the tail, and also on a great part of the coverts of the wings, which are furthest from the back; with this difference between the large and the small sort, that the latter have no mixture of colour, while the former are variegated with brown. The head, the throat, the fore-part of the neck and the breast, are of a glossy brown, deeper under

under the throat, and inclining to orange on the breast, and running into the olive colour of the lower part of the body. The bill and legs are black; the wing-quills, and the large coverts nearest the outer edge, are of the same colour, but bordered with white. The shape of its bill is the same as that of the other orioles; its tail is long, and its wings when closed do not reach the third of the length.

Specific character of the *oriolus olivaceus*: "It is olive; the head, throat, and breast, dusky; the wings black." Synonymes.---*Oriolus olivaceus*, *Gmel.* Cayenne olive oriole, *Lath.*

THE WEAVER ORIOLE.

THE weaver is widely distinguished from the other orioles, by the proportions of its bill, tail, and wings, and the manner in which it builds its nest. It is perhaps the African representative of the American species. The Comte de Buffon describes two of these birds, which he obtained from a lady, as follows:---The eldest had a kind of cowl which appeared of a brown-gold gloss in the sun; this cowl disappeared in the moulting during the autumn, leaving the head of a yellow colour; but it again returned in the spring, and was constantly renewed the succeeding years. The chief colour of the rest of the body was yellow, more or less inclined to orange; this was the predominant colour on the back, and on the lower part of the body; it bordered the coverts of the wings, their quills, and those of the tail, which were all of a blackish ground.

The young one had no cowl till the end of the second year, and did not even change its colours before that time; which occasioned its being mistaken for a female. Before the change which took place in the colours of its plumage, the yellow was of a lighter tint than in the old one; it spread over the throat, the neck, the breast, and bordered, as in the other, all the quills of the tail and of the wings. The back

back was of an olive-brown, which extended beyond the neck as far as the head. In both the iris was orange, the bill of a horn colour, and the legs reddish.

These two birds lived in the same cage, and at first upon good terms with each other; the young one sat generally on the highest bar, holding its bill close to the other, which it answered, by clapping its wings, and with a submissive air. They were observed in the spring to interweave chickweed in the grating of their cage; this was therefore conceived as an indication of their desire to nestle: they were supplied with small rushes, and they built a nest so capacious as to conceal one of them entirely. The following year they renewed their labour; but the young one, being new clothed in the plumage of its sex, was driven off by the other, and obliged to conduct its work alone in another corner of the cage: but it was still persecuted, and, notwithstanding its submissive behaviour, it was often so roughly treated as to be left insensible. They were separated, and each was intent on building; but the labours of one day were often destroyed in the succeeding. A nest is not the production of an individual. They had both a singular kind of song; it was somewhat shrill, but very sprightly. The old one died suddenly, and the young one was cut off by epileptic fits. Their size was rather small, and their wings and tail were proportionably short.

Specific character of the *oriolus texer* :---“It is yellow; its head dusky, glistening with gold; the quills of its wings and tail blackish, and orange at their margin.” Synonymes.---Le cap-more, *Buff.* *Oriolus texer*, *Gmel.*

THE WHISTLING ORIOLE.

THIS bird is in general brown above, except the rump and the small coverts of the wings, which are of a greenish yellow, as also in the whole under-part of the body; but this colour is dusky below the throat,
and

and variegated with rusty on the neck and breast; the great coverts and the quills of the wings, as well as the twelve of the tail, are edged with yellow. But to form an accurate idea of the plumage of the whistler, we must imagine an olive tint of various intensity spread over all the colours without exception. To characterize the predominant colour of the plumage of this bird, therefore, we ought to take olive and not green, as Brisson has done.

The whistler is about seven inches long, and ten or twelve inches across the wings; the tail, which is unequally tapered, is three inches in length, and the bill nine or ten lines. Synonymes.---*Oriolus viridis*, *Gmel.* *Icterus minus viridis*, *Briff.* The whistler oriole, *Lath.*

THE BALTIMORE ORIOLE.

THIS bird is about the size of a house sparrow, and weighing little more than an ounce; its length is six or seven inches, its alar extent eleven or twelve, its tail composed of twelve quills, and two or three inches long, stretching more than a half beyond the wings when closed. A sort of cowl of a fine black covers the head, and descends before upon the throat, and behind as far as the shoulders: the great coverts and the quills of the wings are also black, like those of the tail; but the former are edged with white, and the latter tipped with orange, which is the broader the farther they are from the mid-ones, in which it is wanting. The rest of the plumage is of a beautiful orange; and the bill and legs are of a lead colour.

The baltimores disappear in the winter, at least in Virginia and Maryland, where Catesby observed them. They are also found in Canada, but Catesby met with none in Carolina. They build their nests on large trees, such as the poplars, the tulip trees, &c. They fix it to the end of a thick branch, and commonly support it by two small shoots which enter its sides.

Specific character of the *oriolus baltimore* :---“ It is blackish, the under part of its body, and a stripe on its wings, fulvous.” The nest is curiously woven of tough filaments of plants, intermixed with wool, and lined with hair. It is pear-shaped, open at top, with a hole in the side, by which the young are fed and void their excrements. In some parts of North America it is called, on account of its brilliancy, the *fiery bang-nest*. Synonymes.---*Oriolus baltimore*, Linn. and Gmel. *Icterus minor*, Briss. *Icterus ex auro nigroque varius*, Klein. Baltimore bird, *Catesby*, Penn. and *Lath.*

THE SPURIOUS BALTIMORE ORIOLE.

THIS bird is so called because the colours of its plumage are not so lively as in the preceding; and for this reason it may be considered as a degraded race. In fact, when we compare these birds, and find an exact correspondence in every thing, except in the colours, and not even in the distribution of these, but only in the different tints which they assume; we cannot hesitate to infer that the spurious baltimore is a variety of a more generous race, degenerated by the influence of climate, or some other accidental cause. The black on the head is somewhat mottled, that of the throat pure; that part of the hood which falls behind is of an olive grey, which becomes darker as it approaches the back. Whatever in the preceding was bright orange, is in the present yellow, bordering on orange, and more vivid on the breast and the coverts of the tail than on any other place. The wings are brown, but their great coverts and their quills are of a dirty white. Of the twelve tail quills, the two central ones are blackish near their middle, olive at their origin, and yellow at their extremity; the next one on either side shews the two first colours mixed confusedly; and in the four following quills, the two last colours are melted together. Specific character of the *oriolus spurius* :---“ It is black, fulvous below, with a white stripe on the wings.”

wings." In the state of New-York it usually arrives in May; attaches its nest to an apple tree, and lays five eggs. Synonymes.---*Oriolus spurius*, *Gmel.* *Icterus minor spurius*, *Briss.* *Tardus minor gutture nigro*, *Klein.*

THE BLACK AND YELLOW ORIOLE.

THE principal colours of this bird are constantly black and yellow, but the distribution is not uniformly the same, and varies in different individuals.---The male bird hath the great coverts of the wings nearest the body quite yellow, as also all the hind-part of the body, both above and below, from the thighs inclusively as far as the middle of the tail, and even beyond it.

Specific character of the *oriolus persicus* :---"It is black, the hind-part of its back, and a spot on the coverts of the wings, and at the base of the coverts, yellow." Synonymes.---*Oriolus persicus*, *Linn.* and *Gmel.* *Cassicus luteus*, *Briss.* Black and yellow oriole, *Latb.* In Latin it hath also been called *pica*, *picus minor*, *cissa*, *nigra*, &c. in Italian, *gazza*, or *zalla*, *di terra nuova*; in English, it has been called the *black and white daw* of *Brazil*.

THE RED ORIOLE OF BRAZIL.

IN this species the lower part of the back is red, instead of yellow, and the under surface of the body and of the tail entirely black. These birds are about twelve inches long, and seventeen across the wings; the tail is forked and bluish; the two mandibles are equally arched downwards; the first *phalanx* of the outer toe in each foot seems to grow into the mid-toe; the tail consists of twelve quills, and the under surface is white both below the black and the yellow part of the plumage.

They construct their nests with grass, interwoven with horse hair and hogs bristles, or with vegetable

productions which supply their place, and they imitate the form of a cucurbit fitted to its alembic. The nests are brown on the outside, and about eighteen inches deep, though the interior cavity is only a foot; the upper part is thick and prominent for the space of half a foot; and here they are suspended from the extremities of small branches. Sometimes four hundred of these nests have been seen at once hanging in a single tree; and, as they hatch thrice a-year, the multiplication must be prodigious. This instinct of nestling in society on the same tree, marks some analogy to our daws.

Linnaeus and Gmelin consider the bird described in this article as different from the *jupujuba* of Marcgrave, and form it into a new species under the name of *oriolus hæmorrhous*, the *red-rumped oriole* of Latham. Its specific character, "Black, with a scarlet rump." Synonyme.--*Oriolus persicus*, var. 1. *Gmel.*

THE GREEN ORIOLE.

IT is larger than the preceding; its bill is thicker at the base, and longer; and its legs, though still as short, would appear to be stronger. It has been very properly named the green oriole, for all the fore-part both above and below, and even the coverts of the wings, are of that colour; the hind-part is chesnut; the wing-quills are black, and those of the tail partly black, and partly yellow; the legs are entirely black, and the bill red. The length of this bird is fourteen inches, and its alar extent eighteen or nineteen. Synonyme.--*Oriolus cristatus*, var. 2. *Gmel.*

THE CRESTED ORIOLE.

THIS is a large species. Its bill is proportionably longer and firmer than in the others, but its wings are shorter. Its extreme length is eighteen inches, its tail five, and its bill two. It is also distinguished from the preceding, by small feathers, which it bristles at pleasure.

ture on the top of its head, and which form a sort of moveable crest. All the fore-part of this oriole, both above and below, including the wings and the legs, is black, and the whole of the rest of a deep chefnut. In the tail, which is tapered, the two middle quills are black, like those of the wings, but all the lateral ones are yellow; and the bill is of the same colour.

Specific character of the *oriolus cristatus*:—"It is very black, its top somewhat crested by some elongated feathers." Synonymes.—*Oriolus cristatus*, *Gmel.* *Anthornus maximus*, *Pallas.* Crested oriole, *Lath.*

THE LOUISIANIAN ORIOLE.

WHITE, and changing violet, sometimes mixed together, sometimes separated, are all the colours of this bird. Its head is white, and also its tail, belly, and rump; the feathers of the wings and of the tail are of a waving violet, and edged with white; the rest of the plumage is dyed with a mixture of these colours. It is most common in Louisiana; its whole length is ten inches, and its wings when closed reach to the middle of the tail, which is somewhat tapered. Synonymes.—*Oriolus Ludovicianus*, *Gmel.* White-headed oriole, *Penn.* and *Lath.*

THE BONANA ORIOLE.

THE subject of this article has its plumage painted with three colours, applied in large bodies.---Reddish-brown, which is spread over all the fore-part of the bird, on the head, the neck, and the breast. A velvet black on the back, the feathers of the tail, those of the wings, and their great coverts, and even on the bill and the legs. Deep orange on the small coverts of the wings, the rump, and the coverts of the tail. All these colours are more obscure in the female.

The length of the bonana is seven inches, its bill six lines, its tail above three inches; its wings when spread measure eleven inches, and when closed extend to the middle

middle of the tail, or beyond it. This bird is found at Martinico, and abounds in Cayenne. They construct a curious kind of nest, resembling the quarter of a hollow globe; and sew it under the large leaf of a banana, which shelters the nest, and forms a part of it; the rest consists of the fibres of the leaves. It is their attachment to the banana-tree, that has given them their name.

Specific character of the *oriolus bonana*:---“It is fulvous, its head and breast chestnut, its back and the quills of its wings and tail, black.” Synonymes:---*Oriolus bonana*, *Linn.* and *Gmel.* *Xanthornus*, *Briss.* *Turdus minor varius*, *Klein.* *Bonana bird*, *Brown* and *Lath.*

THE LESSER BONANA ORIOLE.

THE male and female of this species have a jargon nearly like our magpie. They suspend their nests, which are of a purse shape, from the extremity of small branches; but they choose the branches that are long and naked, and select the trees that are stunted and ill-formed, and lean over the course of a river. It is also said that these nests are subdivided into compartments for the separate families, which hath not been observed in the other species. Brisson supposes it to be the same with the *ayocuantototl* of Fernandez, which has indeed the same size, and its plumage composed of black, yellow, and white. But Fernandez says nothing of the distribution of these colours, nor furnishes any property characteristic of the species.

These birds are exceedingly crafty, and difficult to ensnare. They are nearly of the size of a lark; their length eight inches, their alar extent twelve or thirteen, the tail three or four inches, and tapered, stretching more than half beyond the closed wings. The principal colours are yellow and black. In fig. 1. the black is spread over the throat, the bill, and the space between that and the eye, the great coverts, and the quills of the

the wings, and of the tail, and the legs; all the rest is yellow. But we must observe, that the middle quills and the great coverts of the wings are edged with white, and the latter sometimes entirely white. In fig. 2. a part of the small coverts of the wings, the thighs, and the belly, as far as the tail, are yellow, and the rest all black.

Specific character of the *lesser banana bird*:---“ It is yellow; the upper part of its throat, its tail, and wing-quills, black.” Synonymes.---*Le petit cul jaune de Cayenne, Buff.* *Oriolus xanthornus, Linn.* and *Gmel.* *Xanthornus Mexicanus, Briss.*

THE HANG-NEST ORIOLE.

THIS bird is in every respect smaller than the banana, being only six inches in length, and nine across the wings; its plumage is different, and it constructs its nest in another mode. It is a sort of bag, suspended from the extremity of small branches by a thread which they spin out of a substance that they extract from a parasite plant, called *old man's beard*, which many have mistaken for horse-hair. The base of the bill is whitish, and encircled by a black ring; the crown of the head, the neck, the back, and the tail, are of a light brown, or rather reddish grey; the wings of a deep brown, variegated with white feathers; the lower part of the tail marked in its middle with a black line; the sides of the neck, the breast, and the belly, of the colour of a dead leaf. These birds haunt the woods, and have an agreeable song. They feed on insects and worms, for fragments of these are found in their gizzard or stomach, which is not muscular. Their liver is divided into a great number of lobes, and of a blackish colour. Synonymes.---Called also the *watchy picket* and *American hang-nest*. It is the *oriolus nidipendulus* of Gmelin; the *hang-nest oriole* of Latham; and the *Spanish nightingale* of Sloane.

THE

THE GOLDEN-HEADED ORIOLE.

IN this bird the crown of its head, the small coverts of its tail, those of the wings, and the lower part of the thigh, are a beautiful yellow, the rest of the body entirely black or blackish: it is about eight inches long, twelve inches across the wings, the tail consisting of layers, containing twelve quills, each four inches long.

Synonymes.--*Oriolus chryscephalus*, Linn. and Gmel. *Xanthornus icterocephalus Americanus*, Briss. Golden-headed oriole, Lath.

THE YELLOW-WINGED ORIOLE.

THE plumage of this bird is also black, except a remarkable yellow spot on the coverts of the wings: it has twelve quills in the tail, which is tapered, as in the lesser bonana, but somewhat longer. Synonymes.--*Oriolus Cayanensis*, Linn. and Gmel. *Xanthornus Cayanensis*, Briss. Yellow-winged pye, Edw. Yellow-winged oriole, Lath.

THE YELLOW-CAPPED ORIOLE.

THESE are Cayenne bonanas, which have a black plumage, and a sort of yellow cap that covers the head and part of the neck, but descends lower before than behind. A black streak stretches from the nostrils to the eyes, and turns round the bill. Its size is about seven inches long, and eleven across the wings. Synonymes.--*Les coiffes jaunes*, Buff. *Oriolus icterocephalus*, Linn. and Gmel. *Xanthornus icterocephalus Cayanensis*, Briss. Yellow-headed starling, Edw.

THE OLIVE ORIOLE OF LOUISIANA.

THIS bird is distinguished by its peculiar olive tinge in the plumage, especially on the upper part of the body; but this colour is not always uniform; it is tintured with grey on the crown of the head, and with brown behind the neck, on the back, the shoulders,

the wings, and the tail; with a light-brown on the rump and the origin of the tail; and with yellow on the flanks and the thighs, and the large coverts and quills of the wings, whose fundamental colour is brown, are edged with yellow. All the under-part of the body is yellow, except the throat, which is orange; the bill and the legs are of a cinereous brown. This bird is nearly of the size of a house sparrow; its length six or seven inches, its alar extent ten or eleven inches. The bill is near an inch long, and the tail more than two; it is square, and consists of twelve quills. The first quill is the shortest of the wing, and the third and fourth the longest. Specific character of *olive oriole*: ---"It is of a dusky olive, below yellow." Synonyms.---*Oriolus capensis*, *Gmel.* *Xanthornus capitis bonæ spei*, *Briss.* *Olive oriole*, *Lath.*

THE KINK ORIOLE.

THIS species was very lately introduced from China, and appears much to resemble the bonanas. The sides of its bill are compressed, but not scalloped like those of the bonana; and Daubenton the younger has properly given it a distinct name, as being really different from the preceding, though it connects the common chain. Its head, its neck, origin of its back, and its breast, are of ash-grey, and this colour acquires a deeper hue as it approaches the back; the rest of the body, both above and below, is white, as also the coverts of the wings, whose quills are of a polished steel-colour, glistening with reflexions that play between greenish and violet. The tail is short, tapered, and parted by this same steel colour and white; so that on the two mid-quills, the white is only a small spot at their extremity; this white spot extends higher on the following quills, the farther they remove from the middle, and the steel colour retiring, is at last reduced on the two exterior quills to a small spot

near their origin. Synonymes.---*Oriolus sinensis*, *Gmel.* Kink oriole, *Lath.*

THE STRIPED-HEADED ORIOLE.

THIS bird has been regarded by some as a species of blackbird; but is not so large, and is of a more slender shape: its bill, tail, and legs, are shorter, but its toes longer; its head is brown, delicately radiated with white; its wing-quills are also brown, and edged with white; all the body is of a beautiful orange, deeper on the upper-part than on the lower; the bill and the nails are nearly of the same colour, and the legs are yellow. Synonymes.---*Le loriot rayé*, *Buff.* *Oriolus radiatus*, *Gmel.* *Oriolus capite striato*, *Briss.* *Merula bicolor*, *Aldrov.*

The new subjects of this genus lately discovered are as follow:---The rice oriole, *oriolus orizyvorus*. It is black; its head, neck, and breast, of a glossy purple. It inhabits Cayenne. Rusty oriole, *oriolus ferrugineus*; from New York. Red oriole, *oriolus ruber*; from the island Panay. Antiguan yellow oriole, *oriolus flavus*; from Panay and South America. Oonalaskan oriole; *oriolus Aoonalascbkenfis*. Sharp-tailed oriole, *oriolus caudacutus*; from North America.

GRACULA, THE GRAKLE.

THE distinguishing characters of this genus are: Bill convex, knife-shaped, somewhat naked at the base. Tongue entire, somewhat enlarged and fleshy. Feet ambulatory. None of these birds inhabit Europe. There are only twelve species of grakles as yet known; these are remarkable for their thick bill compressed at the sides; their minute nostrils placed at its base; their hooked sharp nails; and the middle of their fore toes is connected with the exterior one. *Linnaeus* has noticed eight birds in this genus; but *Brissou*, in his System, has no genus corresponding to

to it, but has mingled the different species of grakles among the pies, orioles, and thrushes.

THE RELIGIOSA, OR MINOR GRAKLE.

THIS bird is scarcely larger than a common black-bird; its plumage is entirely black, but more glossy on the upper-part of the body, the throat, the wings, and the tail, with green and violet reflexions. What is most remarkable, is a double yellow comb, irregularly jagged, which rises on each side of the head, behind the eye; the two parts recline and approach each other, and on the back of the head they are parted only by a bar of long narrow feathers, which begins at the base of the bill; the other feathers on the crown of the head form a sort of black velvet. The tail, which is eighteen lines long, is yellow, but receives a reddish tinge near the tail; lastly, the legs are of an orange yellow. The tail of this bird is shorter, and the wings longer, than in the common blackbird; these extend within half an inch of the end of the tail, and measure eighteen or twenty inches across. The tail consists of twelve quills, and of those of the wing, the first is the shortest, and the third the longest.

This species which is found in several parts of the East Indies, in the Isle of Hainan, and almost every isle beyond the Ganges, is remarkable for whistling, singing, and talking well, much better than of the parrot genus, and in particular very distinct. Its food is of the vegetable kind. Those kept in this climate are observed to be very fond of cherries and grapes: if cherries are offered to one, and it does not immediately get them, it cries and whines till it has obtained its desire. It is a very tame and familiar bird. Specific character of the *gracula religiosa*:---“It is violet black, with a white spot on the wings, and a naked yellow stripe on the back of the head.” It is ten inches and a half long; lives upon fruits, grapes, &c.

Synonymes.---*Gracula religiosa*, Linn. and Gmel. *Mainatus*, Briss. Minor grakle, Lath. It is also the Indian stare of Bontius, the *corvus javanensis* of Osbeck, and seems to be the *merula persica* of Camel, (Philos. Transact. No. 285.) This last author says, that "it is a sonorous and chattering bird, black, but naked about the eyes like the *illing*, but less so."

THE GREAT MINOR GRAKLE.

THE crest of this species is the same as in the preceding, and the bird differs from that only in size, and in slight variations of colour. It is nearly the bulk of the jay, and consequently double the preceding, and the yellow of the bill and legs has no reddish tinge.---We are not informed whether the crest of these grakles is subject to change of colour, according to the different seasons of the year, and the various passions by which they are actuated. This is the *gracula religiosa*, var. of Linnæus and Gmelin; greater minor, of Edwards and Latham. These two birds are correctly represented in the annexed plate. Edwards, in his Natural History, informs us that he dissected the larger of these birds, and found it to be the female; and he rather suspects the smaller one to be the male of the same species, notwithstanding the disparity in size.

THE BALD GRAKLE.

IN this species, the upper part of the body is of a light silver-grey, the tail and wings darker, each eye encircled by a bit of skin entirely bare, and forming an irregular ellipse, inclined on its side, the eye being the inner focus; on the crown of the head is a line of blackish feathers, which runs between these two skins; the under-part of its body is brown, varied with some white spots; the naked skin which surrounds the eyes is flesh-coloured, the bill, the legs, and the nails, black. Poivre informs us, that the naked skin, sometimes



The Minor Grakles, Greater and Less..

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J. P. & Co. sculp.



times yellow, sometimes flesh-coloured, which surrounds the eyes, is painted with a bright orange when the bird is angry; and this must probably happen likewise in the spring, when the bird burns with a passion as impetuous, but more gentle. It has the name of *goulin* in the Philippine islands, where it very much abounds.

These birds commonly nestle in the holes of trees, especially on the cocoa-nut tree; they live on fruits, and are very voracious, which has given rise to the vulgar notion, that they have only one intestine, which extends straight from the orifice of the stomach to the anus. Specific character of the *gracula calva*:---“It is somewhat ash-coloured; its head naked on both sides.” Synonymes.---*Gracula calva*, Linn. and Gmel. *Merula calva philippensis*, Briss. Bald grakle, Lath.

THE CRESTED GRAKLE.

THOUGH this bird is somewhat larger than the blackbird, its bill and legs are shorter, and its tail much shorter; almost all its plumage is black, with a dull blue tint, but not glossy; a white spot appears in the middle of the wings, and impressed on the quills, and a little white on the tips of the lateral quills of the tail; the bill and legs are yellow, and the iris of a fine orange. There is a small tuft of long feathers on the forehead, forming a crest, which the bird can bristle up at pleasure. These birds, which are said to talk and whistle extremely well, are very common in China, where they are much esteemed, and the figures of them are frequently seen in Chinese paintings and paper-hangings.

It is difficult to be brought from China into Europe. Its length is eight inches and a half; its wings, when closed, reach to the middle of the tail, which is only two inches and a half long, and composed of twelve quills nearly equal. Specific character of the *gracula cristatella*, Linn.---“It is black, the primary wing-quills

406 NATURAL HISTORY

quills white at their base, and the tail-quills at their tips; the bill yellow."

Synonymes.---*Gracula cristatella*, Linn. and Gmel. *Merula sinensis cristata*, Briss. *Sturnus crinibus cinereis*, &c. Klein. Chinese starling, or blackbird, Edw. Crested grackle, Lath.

THE BARITA, OR BOAT-TAILED GRAKLE.

THIS species is about the size of a cuckow. The bill is sharp, black, and an inch and a half in length; the general colour of the plumage is black, with a gloss of purple, especially on the upper parts; the legs and claws are black, the latter hooked. There is a singularity in the folding up of the tail-feathers, which, instead of forming a plain surface at top, sink into a hollow like a deep gutter. It always carries its tail expanded when on the ground, folding it up in the above singular manner only when perched or flying. It inhabits Jamaica; and it feeds on maize, beetles, and other insects, as well as on the fruit of the banana. It is likewise common in North America, keeping company with the flocks of the maize-thieves, and red-winged oriole. These breed in the swamps, and migrate in September, after which none are seen.

THE QUISCULA, OR BARBADOES GRAKLE.

THE whole bird is black, but most beautifully and richly glossy with purple, especially on the head and neck. The female is wholly of a brown colour, deepest on the wings and tail. This species inhabits Carolina, Mexico, and other parts of North America, also Jamaica. These birds for the most part feed on maize, whence the name of *maize-thieves* has been given them; but this is not their only food, for they are known also to feed on many other things. In spring, soon after the maize seed is put into the ground, they scratch it up again; and, as soon as the leaf comes out, they take it up with their bills, root and all; but when it

it is ripe they do still more damage, for at that time they come in troops of thousands, and are so bold, that, if disturbed in one part of a field, they settle in another. In New Jersey and Pennsylvania three-pence per dozen was given for the dead birds, and by means of this premium they were nearly extirpated in 1750; when the persecution of them was abated on account of the great increase of worms which had taken place in the meadows, and which in the preceding year had left so little hay in New England as to occasion an importation from other parts. The grakles were therefore again tolerated, as it was observed that they fed on these worms till the maize was ripe. These birds build in trees. They are said to pass the winter in swamps, which are quite overgrown with wood, from thence only appearing in mild weather; and, after the maize is got in, are content to feed on other things, as the aquatic tare-grass, and, if pressed by hunger, buckwheat and oats, &c. they are said also to destroy that pernicious insect the bruchus pisi. Their note is pretty and agreeable; but their flesh is not good to eat.

THE PARADISE GRAKLE.

THIS bird feeds upon insects, and the havoc which it makes is the more considerable, as it has a gluttonous appetite: the various sorts of flies and caterpillars are its prey. Like the carrion crows and magpies, it hovers about the horses, the oxen, and the hogs, in search of the vermin which often torment these animals to such a degree as to exhaust them; and even occasion death. The patient quadrupeds are glad to get rid of these, and suffer, without molestation, often ten or twelve paradise grakles to perch on their back at once; but the intruders are not content with this indulgence; the skin need not be laid bare by some wound; the birds will peck with their bill into the raw flesh, and do more injury than the vermin which they extract. They may indeed be considered as carnivorous birds, whose

whose prudence directs them to attack openly none but the weak and the feeble. A young one was known to seize a rat two inches long, exclusively of the tail, dash it repeatedly against the board of its cage, break the bones, and reduce every limb to a pliancy suited to its views; and then lay hold of it by the head, and almost in an instant swallow it entire. It rested about a quarter of an hour to digest it, its wings drooping, and its air languid; but, after that interval, it ran with its usual cheerfulness, and about an hour afterwards, having found another rat, it swallowed that as it did the first, and with as little inconvenience.

This bird is also very fond of grasshoppers; and, as it destroys immense quantities, it is a valuable guest in countries infested with these insects. It is found in India and the Phillippines, and probably in the intermediate islands. These birds are not timorous, and are little disturbed by the report of a musket. They commonly take possession of certain trees, or even certain rows of trees, often very near hamlets, to pass the night. They alight in an evening in such immense bodies, that the branches are entirely covered with them, and the leaves concealed. When thus assembled, they all begin to chatter together, and their noisy society is exceedingly troublesome to their neighbours. Yet their natural song is pleasant, varied, and extensive. In the morning they disperse into the fields, either in small flocks, or in pairs, according to the season.

They have two hatches in succession every year, the first being in the middle of spring. These turn out well, unless the season be rainy. Their nests are very rude, and they take no precaution to prevent the wet from penetrating. They fasten them in the leaves of the palm or other trees, and, whenever an opportunity presents, they prefer a hay-loft. These birds are warmly attached to their young. When their nests are about to be robbed, they flutter round, and utter a sort of croaking, which indicates their rage, and dart
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upon the plunderer. Nor do their fruitless exertions extinguish their affection; they follow their brood, which, if set in a window or open place, the parents will carefully supply with food; nor will they in the least be deterred by anxiety for their own safety.

The young paradise grakles are quickly trained, and easily taught to talk. If kept in the poultry-yard, they spontaneously mimic the cries of all the domestic animals, hens, cocks, geese, dogs, sheep, &c. and their chattering is accompanied with certain accents and gestures, which are very pleasing.

These birds are rather larger than the blackbirds; their bill and legs are yellow as in these, but longer, and the tail shorter. The head and neck are blackish; behind the eye is a naked reddish skin, of a triangular shape, the lower-part of the breast, and all the upper-part of the body, including the coverts of the wings and of the tail, of a chestnut brown; the belly white; the twelve quills of the tail, and the middle quills of the wings, brown; the large ones blackish, from the tip to the middle, and thence to their origin white; which produces an oblong spot of that colour near the edge of each wing when it is closed; and in this situation the wings extend as far as two-thirds along the tail.

Synonymes.---Le martin, *Buff.* *Paradisea tristis*, *Linn.* and *Gmel.* *Gracula tristis*, *Lath. Ind.* *Merula Phillippensis*, *Briss.*

The newly-discovered species are, The fetid grakle, *gracula fetida*: it is black; the outside of its wing-quills bluish; a naked bar on its neck: from North America. Boat-tailed grakle, *gracula banta*: it is greyish; its shoulders blue; the outside of its wing-quills green: it inhabits the warmer parts of America and the West Indies. Egyptian grakle, *gracula atthis*: it is blue-green; its belly ferruginous; its legs blood-coloured: it is of the size of a lark; it feeds on insects. Long-billed grakle, *gracula congirostra*; from Surinam.

Daurian grackle; *gracula sturna*. Yellow-faced grackle; *oriolus isferops*; from New Holland.

PARADISEA, THE PARADISE BIRD.

THIS singular and beautiful genus contains the birds of paradise, which amount to nine species. Their distinguishing characters are: Bill covered with a downy collar or bridle at the base. Flank feathers longer. Tail quills, the two upper detached and unwebbed. These birds chiefly inhabit New Guinea, from which they remove in the dry season to the adjacent spice-islands. Their nostrils are small, and covered with feathers, and their tail consists of ten quills, of which the two mid-ones are webbed only at the root and the tip; their feet are large and stout; the middle of the fore toes is connected to the outer at the first joint. The whole of this genus have, till lately, been very imperfectly known; few cabinets possessing more than one species, viz. the greater, or what is called, the *common bird of paradise*; nor has any set of birds given rise to more fables, the various tales concerning which are to be found in almost every writer on ornithology. The different species are as follow:

THE APODA, OR GREATER BIRD OF PARADISE.

THE residence of this bird was said to be in the earthly paradise. It was believed by the credulous and ignorant, that it lived alone upon the air and the dew; that it had no entrails, nor feet; but remained perpetually floating upon the air, while sleeping, as well as while awake; while hatching and laying, as well as while procreating its young. Instead of a stomach and intestines, which, to so extraordinary a feeder, would have been useless, the cavity of its abdomen was said to be filled with fat. The truth is, the hunters who procure and sell these birds, take out their entrails, the better



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The Apoda, or Greater Bird of Paradise.

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better to preserve and carry them; and perhaps too with a view to perpetuate the belief of those fables, which they have found so beneficial to their trade.

If any thing could give an air of probability to the perpetual flying of the bird of paradise, it might be its extraordinary lightness. A bird no larger than a thrush, swelled to an immense bulk by its feathers, is rendered specifically lighter than any other. About forty or fifty long feathers spring from each side, below the wing, which, mingling with those of the tail, augment the apparent size of the animal, without adding hardly any thing to its weight. However well qualified to support itself in the air, the bird of paradise is unable to direct its flight, either across or in opposition to the wind; and it is observed to prefer those places which are most sheltered.

In some parts of India, the feathers of this bird bring a great price. They are extremely well suited for the ornaments of dress, both by their lightness and their lustre. About a century ago, they were employed in Europe for the same purposes for which those of the ostrich are now purchased. In India, however, they derive their principal value from certain miraculous virtues which the priests have ascribed to them, and which have procured the animal to which they belong, the title of *the bird of God*.

What renders this bird still more remarkable, is two long naked feathers, like threads, that arise in the uropigium, above the false tail already described. These are of an enormous length, extending above a foot beyond the longest of that large mass. The head, back, and breast, of these birds, are covered with short straight feathers, which, to the touch, are soft like velvet. They are of different colours, and so changeable in their hue, that they vary continually, according to the different points from which they are viewed. They are confined in their residence to a few of the Spice-islands, and New Guinea. Their decided pre-

ference of the spice trees, has led some to believe, that they find upon them their favourite food. Linnæus, however, asserts, that they are insectivorous, and feed mostly on the butterfly. Their usual residence is in the woods, where they are shot by the Indians with arrows of reeds. For this purpose the Indians have a curious method of concealing themselves in small huts, that are fastened among the branches of the trees.

Belon pretends that the bird of paradise is the same with the phoenix of the ancients; but the countries which they inhabit are too distant for such an hypothesis; Egypt being the habitation of the latter, and the eastern parts of Asia that of the former. There does not seem to be the most distant affinity between them, excepting the monstrous fables to which both have given rise.

Marcgrave has inserted a description of this species in his history of the birds of Brasil; but it does not appear that any of them were ever seen in America, unless it were those which were transported thither by the vessels that trade between Asia and that continent. It is extremely improbable that a bird, so little capable of directing its flight amidst a gentle breeze, should ever have attempted so long a voyage. The bird of paradise is confined within very narrow limits in that continent which it inhabits, and never has shewn a disposition to go beyond them: it is not to be supposed, therefore, that it should ever have attempted to cross the Pacific Ocean.

It does not appear that this bird was known either to the Greeks or Romans. The striking and singular characters by which it is so remarkably distinguished from all the other tribes of the feathered race, could not fail to have been recorded in some part or other of their writings, had they possessed but the smallest knowledge of this beautiful genus.

The Portuguese first discovered these birds in the island of Gilolo; and they were known by the name
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of *birds of the sun*. The inhabitants of Ternate called them *manuco dewata*, "the bird of God;" whence the name *manuco diata*, used by some naturalists, is derived. According to them, these birds have no legs; and this error is scarcely at this moment wholly eradicated. The circumstance which gave rise to it did not indeed at first proceed from an intention to deceive, but merely from accident: in the parts of the world which produce these birds, the natives made use of them as aigrets and other ornaments of dress, and in course threw away the less-brilliant parts; all the trouble they were at on this occasion was merely to skin the bird, and, after cutting off the legs, the coarser parts of the wings, &c. to thrust a stick down the throat into the body, letting an inch or two hang out of the mouth beyond the bill; on the bird's drying, the skin collapsed about the stick, which became fixed, and supported the whole. They had then no more to do than to put this end of it into a gold or silver socket fitted to receive it, or fasten it in some manner to the turban, &c. By degrees these were imported into the other isles for the same uses, and afterwards were coveted by the Japanese, Chinese, and Persians, in whose countries they are frequently seen, as well as in many parts of India; the grandees of these last parts not only ornamenting themselves with these beautiful plumes, but adorning even their horses with the same. These birds are not found in Key, an island fifty Dutch miles east of Banda; but they are found at the Arou islands, lying fifteen Dutch miles farther east than Key, during the westerly or dry monsoon; and they return to New Guinea as soon as the easterly or wet monsoon sets in. They come always in a flock of thirty or forty; and during their flight they cry like starlings. Their note, however, approaches more to the croaking of ravens; which is heard very plainly when they are in distress from a fresh gale blowing on the back of their plumage.

414 NATURAL HISTORY

mage. In Arou, these birds settle on the highest trees, especially on the ficus benamina of the hortus malabaricus, commonly called the *waringa tree*. The natives catch them with bird-lime or in nooses, or shoot them with blunt arrows; but, though some are still alive when they fall into their hands, the catchers kill them immediately, not knowing their food; then they draw out the entrails, dry and fumigate the bodies with sulphur, and sell them at Banda for half a rix-dollar each. Flocks of these birds are often seen flying from one island to the other against the wind. In case they find the wind become too powerful, they fly straight up into the air, till they come to a current where it is less agitated, and then continue their flight. During the eastern monsoon their tails are moulting, so that they have them only during four months of the western monsoon.

Clusius mentions, on the authority of some mariners, who themselves learned the fact from report, that there are two kinds of this bird; the one large and beautiful, which inhabits the islands of Arou; the other inferior to it in size and elegance, which is settled in the country of the Papous, next Gilolo. Helbigius, who heard the same in the islands of Arou, adds, that the birds of paradise of New Guinea, or of the Papous, differ from those of Arou, not only in point of size, but also in the colours of the plumage. These authorities, however, are insufficient to found any general conclusion. The dried specimens indeed, which are brought to Europe, present great diversity of appearance; in size, in the number and position of the feathers, in the colours of the plumage, &c. But, in such mutilated and imperfect preparations, it is impossible to decide what must be ascribed to the effect of age, of sex, of season, of climate, and of other accidental causes. Besides, the birds of paradise being very expensive articles of commerce, many other birds, with long tails and an elegant plumage, have been

passed on the credulity of the public, and the legs and thighs pulled off, to conceal the fraud and enhance the price. We have already had an example in the paradise roller, mentioned by Edwards, on which the honours of mutilation had been conferred, in order to make it pass for a bird of paradise. Specific character of the *paradisea apoda* of Linnæus :---“ The feathers on the flanks are longer than the body ; the two middle tail-quills long and hairy.”

Synonymes.--L'Oiseau de paradis, Buff. *Paradisea apoda*, Linn. and Gmel. *Manucodiata*, Briss. *Paradisea avis*, Clusius, Seba, Wormius, &c. In Latin, *apis Indica*, *avis Dei*, *parvus pavo*, *pavo Indicus*, *manucodiata*, which the Italians have adopted, *manucodiata rex*, *manucodiata longa*, *bippomanucodiata*, *hirundo ternatensis* : in German, *lust-vogel* (sky-bird,) *paradis-vogel* : in Portuguese, *passaros de sol* (sparrow of the sun).

THE KING BIRD OF PARADISE.

THE Indian name of this species signifies the *bird of God*. That given it by the English writers, had its origin in those fables that were propagated by the sailors, who retailed the fictions they had learned from the superstitious Indians. One of these was, that each species of the birds of paradise had its own king, to which every individual paid submission and obedience; that this king always flew in a higher region of the air than his subjects, from which he issued various orders to them ; such as, to go and examine the springs where he might drink with safety, and to taste of them before him.

This alleged king of the birds of paradise, in many circumstances resembles the preceding ; in more, perhaps, differs from it. His head is garnished with the same velvet covering ; his eyes are equally small ; and he has the two filous and naked feathers springing from the uropigium, and going greatly beyond the tail.

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416 NATURAL HISTORY

These are, however, much inferior in length; and their extremity, which is furnished with webs, forms a curl, by rolling into itself, and is ornamented with spangles, somewhat like those of a peacock. He also has under the wing, on each side, a bunch of seven or eight feathers, which are longer than in most birds, but not so long as those of the greater bird of paradise, and of a different shape, for they are edged through their whole extent with webs of adhering filaments. The king bird is smaller, the bill white and long in proportion; the wings are also longer, the tail shorter, and the nostrils are covered with feathers.

Clusius counted only thirteen quills in each wing, and seven or eight in the tail; but he did not consider that in a dried specimen these might be incomplete. The same author remarks as a singularity, that in some the two filaments of the tail cross each other, though this might often happen from accident, considering their flexibility and their length. Specific character of the *paradisea regia* of Linnæus:---“The two middle tail-quills are thread-like, their tip of a crescent-shape, and feathery.”

Synonymes.---*Paradisea regia*, Gmel. *Manucodiata minor*, Briss. *Rex avium paradisæarum*, Gaza, Seba, Clusius, &c. *King's bird*, Forrest. *King paradise bird*, Lath.

THE MAGNIFICENT BIRD OF PARADISE.

THE two tufts, which are regarded as the distinctive character of this bird, appear behind the neck, and at its origin. The first consists of several narrow feathers of a yellow colour, marked near the point with a small black spot, and which, instead of lying flat, in the usual manner, stand almost erect; those near the head at right angles, and the succeeding ones, with smaller inclinations.

Under the first tuft we perceive a second, which is larger, but not so much raised, and more reclined: it
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is composed of long detached filaments, which sprout from very short shafts, and of which fifteen or twenty join together, forming straw-coloured feathers. These feathers seem to be cut square at the end, and make angles, more or less acute, with the plane of the shoulders. This second tuft is bounded on the right and left by common feathers, variegated with brown and orange, and is terminated behind by a reddish and shining brown spot, of a triangular shape, with the vertex turned towards the tail, and the filaments of the feathers loose and decomposed, as in the second tuft.

Another characteristic feature of this bird is, the two filaments of the tail, which are about a foot long and a line broad, and of a blue colour, changing into a lucid green, and taking their origin above the tail. So far they much resemble the filaments of the preceding species, but are of a different form, for they do not end in a point, and are furnished with webs on the middle only of the inner side.

The middle of the neck and breast is marked from the throat by a row of very short feathers, displaying a series of small transverse lines, which are alternately of a fine light green, changing into blue, and of a deep duck-green. Brown is the prevailing colour on the lower belly, the rump, and the tail; rusty yellow is that of the quills, the wings, and of their coverts; but the quills have more than one brown spot at their extremity; at least this was the case in the specimen described by the Comte de Buffon.

This bird is rather larger than the preceding; its bill is similar, and the feathers of the front extend over the nostrils, which they partly cover: yet this is inconsistent with the character that has been established of these birds by Brisson. The feathers of the head are short, straight, close, and very soft to the touch. They form a sort of velvet of a changing colour, as in almost all the birds of Paradise, and of a brownish ground. The throat is also covered with velvet fea-

thers ; but these are black, with golden-green reflections. Specific character of the *paradisea magnifica* :---“ It is scarlet above ; the upper part of its throat green, with golden crescents ; the neck bearing a bunch of yellow feathers.” Synonymes.---Le magnifique de la Nouvelle Guinée, ou le manucode à bouquets, Buff. *Paradisea magnifica*, Gmel.

THE SUPERB BIRD OF PARADISE.

THE predominant colour of the plumage of this bird is a rich velvet black, decorated under the neck with reflections of deep violet. Its head, breast, and the hind part of its neck, are brilliant, with the variable shades of a fine green ; the rest is entirely black, not even excepting the bill. It seems to want the filaments of the tail ; but in other respects it resembles these birds, not only in its general shape, and in that of its bill, but is also related by the identity of climate, by the richness of its colours, and a certain superabundance or luxuriance of feathers which is peculiar to the birds of paradise : for there are two small tufts of black feathers which cover the nostrils, and two other bunches of the same colour, but much longer, and directed to the opposite extremity. These rise on the shoulders, and spreading more or less over the back, but always bent backwards, form a sort of wings, which extend almost to the extremity of the tail, when these are closed. We must add, that these feathers are of unequal lengths, and that those of the anterior surface of the neck and the sides of the breast are very long and narrow.

Specific character of the *paradisea superba* :---“ It is somewhat crested with a gold-green ; below, it is a lively green ; the upper part of the throat violet ; its wings black ; its tail blue and shining.” Synonymes.---*Paradisea superba*, Gmel. Superb paradise bird, Lath.

THE GOLDEN BIRD OF PARADISE.

IF we adopt the filaments as the specific character of the birds of paradise, the present is entitled to be ranged at their head; for, instead of two, it has six, and of these not one rises on the back, but all of them take their origin from the head, three on each side. They are half a foot long, and reflect backwards. They have no webs but at their extremity for the space of six lines, and these are black and pretty long. Besides these filaments, this bird has two properties which belong to the bird of paradise; luxuriancy of feathers, and richness of colours.

The luxuriancy of feathers consists; 1. In a sort of tuft composed of stiff narrow feathers, and which rises at the base of the upper mandible. 2. In the length of the feathers of the belly and of the abdomen, which is four inches or more; one part of these feathers, extending directly, conceals the under-side of the tail, while another part, rising obliquely on each side, covers the upper surface of the tail as far as the third of its length, and all of them correspond to the subalar feathers of the greater bird of paradise.

With regard to the plumage, the most brilliant colours appear on the neck; behind, it is gold-green and bronze violet; before, topaz-gold reflections, which wanton in all the shades of green, and derive new lustre from the contrast with the darkness of the contiguous parts; for the head is black, changing into a deep violet; and the rest of the body is brown, inclining to black, and with reflections of the same deep violet.

The bill of this bird is nearly the same as in the other birds of paradise; the only difference is, that its upper ridge is angular and sharp, while in most of the other kinds it is rounded. Nothing can be said with respect to the feet and the wings, because they were extirpated in the subject from which this description is drawn; a practice which, as we have remarked, is

usual with the Indian hunters or merchants. Specific character of the *paradisea aurea* :---“It is crusted with black; the top, the cheeks, and the upper part of its throat, are glistening violet; the rest of the throat, the breast, and the spot on the neck, gold-green.”

Synonymes.---*Paradisea aurea*, *Gmel.* Gold-breasted bird of paradise.

THE BLUE-GREEN BIRD OF PARADISE.

IF this bird has not the luxuriant plumage of the rest of the paradise tribe, it has at least the rich colours and the peculiar softness of texture. Its head is covered with a beautiful blue velvet, changing into green, and exhibiting the reflections of the beryl. The neck is clothed with a longer shag, but which dazzles with the same colours, except that each feather, being of a shining black in the middle, of a green changing into blue only at the edges, there result waving shades, which play still more than those of the head. The back, the rump, the tail, and the belly, are blue, like polished steel, and with very brilliant reflections.

The small velvet feathers on its forehead project forwards as far as the nostrils, which are deeper than in the preceding kinds. The bill is also longer and thicker, but it is of the same shape, and its edges are scalloped in the same manner near the point. Six quills only are reckoned in the tail, but probably it was not entire.

In the subject on which this description is founded, a stick was passed through their whole length, and projected two or three inches out of the bill. In that simple way, and by extirpating the feathers which would spoil the effect, the Indians can in an instant form an elegant sort of plume with any small bird which they meet. But the specimens are thus deranged, and their proportions altered. On this account it is difficult always to discover the insertion of the wings; insomuch that credulity might have asserted that this bird had neither feet nor wings.

Specific

Specific character of the *paradisea viridis* :---“ It is sea-green ; its back, belly, rump, and tail, steel-coloured.” It is sixteen inches long. Synonymes.--- *Paradisea viridis*, *Gmel.* The blue green paradise bird, *Lath.*

The later-discovered species of this genus are, the gorget bird of paradise, *paradisea gularis* ; in length twenty-eight inches. The white-winged paradise bird, *paradisea leucoptera* ; in length twenty-five inches. The white paradise bird, *paradisea alba* ; from the Papuan islands.

TROGON, OR THE CURUCUI.

OF this genus of birds there are seven species, besides some varieties. Their generic characters are: Bill, shorter than the head, knife-shaped, hooked serrated at the margin of the mandibles ; feet, scanfory. They are natives of the hottest parts of America, where they live solitary in the close swampy forests, and sit on the lower boughs. They take very short flights, and subsist upon insects ; their body is long-shaped, their feet short, their tail very long, and containing twelve quills.

THE RED-BELLIED CURUCUI.

THIS bird is ten inches and a half long ; the head, the whole of the neck and the rise of the breast, the back, rump, and coverts of the upper side of the tail, are of a fine brilliant green, but changing, and, in a certain position, blue ; the coverts of the wings are blue grey, variegated with small black zig-zag lines ; and the great quills of the tail are black, except their shafts, which are partly white ; the quills of the tail are of a fine green, like the back, except the two outer ones, which are blackish, and have small transverse grey lines ; a part of the breast, the belly, and the
coverts

coverts of the under side of the tail, are of a fine red; the bill is yellowish, and the legs are brown.

Another variety, which appears to have been a female, differed in no respect, except that all the parts, which were of a fine brilliant green in the first, are blackish grey in this, and without any reflections; the small zig-zag lines are much more indistinct, because the dark brown predominates and the three outer quills of the tail have, on their exterior webs, alternate black and white bars; the upper mandible is entirely brown, and the lower yellowish; the red colour is also much less spread, occupying only the lower belly, and the coverts of the under surface of the tail.

Their season of love commences in April: they choose the hole of a tree, and line it with the dust of worm-eaten wood; and this bed is as soft as cotton or down. If they cannot find such dust, they break fresh wood with their bill, and reduce it to powder; and their bill, which is indented near the point, is sufficiently strong for that purpose: it also serves to enlarge the hole, when not sufficiently wide. They lay three or four eggs, which are white, and somewhat smaller than those of a pigeon. While the female hatches, the employment of the male is to bring supplies of food, to keep watch on a neighbouring bough, and to sing. At other times he is silent and reserved. The young, at the moment of their exclusion, are entirely naked, without any trace of feathers, but which begin to sprout two or three days after. Their head and bill appear uncommonly thick, compared with the rest of their body; their legs too seem excessively long, though they are very short when the bird is grown. The male becomes silent the instant that the brood are hatched; but he again resumes his song in the months of August and September. They feed their young with worms, caterpillars, and insects. Their enemies are the rats, the serpents, and both the nocturnal and diurnal birds of prey; so that this species often fall a sacrifice



The Red-bellied Curucui, and Spotted Barbet.

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sacrifice to depredations. After the young are flown, and are capable of providing their own subsistence, they leave their parents, and abandon themselves to those solitary habits that distinguish their race.

In some individuals the legs are reddish, in others they are slaty blue. It has not been observed whether this diversity is occasioned by age, or results from the difference of sex. Specific character of the *trogon-curucui*:---“It is gold-green, below fulvous; its throat black.” Synonymes.---Le couroucou à ventre rouge, *Buff.* Trogon-curucui, *Edw.* and *Latb.* Trogon Brasilenfis viridis, *Briss.* Tzinitzian, *Fernand.* *Johnst.* *Will.* and *Ray.*

THE YELLOW-BELLIED CURUCUI.

THIS bird is about eleven inches long; the wings when closed do not reach quite to the tail; the head and the upper side of the neck are blackish, with reflections of handsome green in some parts; the back, the rump, and the coverts of the upper side of the tail, are brilliant green, like the thighs; the great coverts of the wings are blackish, with small white spots; the great quills of the wings are blackish, and the four or five outer ones have a white shaft; the quills of the tail are of the same colour with those of the wings, except that they have some reflections of a brilliant green; the three outer ones on each side are radiated transversely with black and white; the throat and the under side of the neck are dark brown; the breast, the belly, and the coverts below the tail, are of a fine yellow; the bill is indented, and appears dark brown, as well as the legs; the nails are black; the tail is tapered, the feathers on each side being two inches shorter than the two middle ones, which are the longest.

Specific character of the *trogon viridis*:---“It is gold-green, below yellow; its throat black; a gold-green bar on its breast.” Synonymes.---Le couroucou à ventre

à ventre jaune, *Buff.* *Pittacus viridis*, *Linn.* and *Gmel.*
Trogon Cayanensis viridis, *Briss.*

Between the red-bellied curucui and the yellow-bellied curucui lie some varieties, which some authors have taken for different species. Such, for instance, is the Guiana curucui, which is only a variety of the above species; the sole difference being, that the upper side of the back, which in the one is fine azure, is ash-coloured in the other. Further, the bird represented by the name of the *rufous-tailed curucui of Cayenne*, is a variety of the same yellow-bellied curucui, produced by moulting; since the only difference is that the feathers of the back and tail are rufous instead of blue. This is the trogon rufus, of *Gmelin*; and the rufous curucui, of *Latham*.

There is also a variety of this yellow-bellied curucui termed by *Brissot* the *white-bellied green curucui of Cayenne*. The only difference lies in the colour of the tail, which may be owing to age. It might also be an accidental diversity; but certainly none of these three birds can be regarded as a distinct and separate species.

THE VIOLET-HOODED CURUCUI.

THE throat, neck, and breast, are of a dusky violet; the head is of the same colour, except that of the front, and of the space round the eyes and ears, which is blackish; the eye-brows yellow; the back and rump of a deep green, with gold reflections; the superior coverts of the tail are bluish-green, with the same gold-reflections; the wings are brown, and their coverts, as well as the middle quills, are dotted with white; the two central quills of the tail are green, verging on blue, and terminating with black; the two adjacent pairs are of the same colour in the uncovered part, and blackish in the rest; the three lateral pairs are black, striped and terminated with white; the bill is lead colour at the base, and whitish near the point; the

the tail exceeds the wings when closed, by upwards of two inches; and the total length of the bird is nine inches and a half.

M. Koelreuter calls this bird *lanius*; but it is of a genus very different from that of a shrike, a lanper, or other birds of prey. A broad short bill, and bristles around the lower mandible; such are the characters which it has in common with the curucuis. But the properties wherein it resembles the cuckoos, that the legs are very short and feathered to the nails, which are slender and disposed in pairs, the one before and the other behind; that the nails are short, and slightly hooked; and lastly, the want of a membrane around the base of the bill: all these differ from the characters of the rapacious tribe.

These birds are never observed to consort in flocks; they generally sit on the middle branches, the cock and hen on separate but adjacent trees, and call each other alternately, by repeating their hollow monotonous cry, *ooroo-coais*. They never fly far, but only from tree to tree, and seldom do that; for they remain during the greatest part of the day in the same spot, concealed beneath the thickest boughs; where, though their voice is continually heard, yet, as they are motionless, they can hardly be discovered. They are clothed so thickly with plumage, that they appear larger than in reality; they would seem to equal the bulk of a pigeon, though they have not more flesh than a thrush. But, if their feathers be numerous and close, they are weakly rooted, for they drop with the least rubbing. These birds are among the most beautiful of South America. Fernandez says that the fine feathers of the red-bellied curucui were used by the Mexicans in making portraits, a gaudy kind of paintings, and other ornaments which they wore at festivals, or in battle. Specific character of the *trogon violaceus*:---“It is violet; its eye-brows bright yellow; its back and rump gold-green; its wings brown; its intermediate tail-quills bluish-green,

tip with black." Synonymes.---Le couroucou à chaperon violet, *Buff.* Trogon violaceus, *Gmel.* Violet-headed curucui, *Latb.*

The newly-discovered species are as follow: The faciated curucui, *trogon fasciatus*; from Ceylon. Spotted curucui, *trogon maculatus*; from Ceylon. Blue-cheeked curucui, *trogon Asiaticus*; from India. Blackish spotted curucui, *trogon Indicus*; from India.

BUCCO, THE BARBET.

THE characters which distinguish this genus are as follow: Bill, knife-shaped, compressed laterally, notched on each side at the tip, bent, with a chap stretching forward below the eyes. Nostrils hid under reclining feathers. Feet scanfory. There are seventeen species, and some varieties. They occur in Africa, but chiefly inhabit Asia, and the hotter parts of America. They are reckoned dull and stupid birds: their bill is stout, and remarkably covered with projecting bristles. Buffon has very properly distinguished those of the new, which he calls *tamatia*, from those of the old continent, which are the only ones to which he gives the name of barbet. Those of the ancient hemisphere are certainly very much distinguished by the thickness and shortness of the bill; and, far from affecting the stupid gravity of the American species, they attack the smaller tribes with the boldness and intrepidity of the butcher-bird.

THE SPOTTED BARBET.

THIS bird occurs not only in Brazil, but also in Cayenne. Its total length is six inches and a half, of which the tail occupies two inches; the bill is fifteen lines, its upper extremity hooked, and as it were, divided into two points; the bristles or beard which covers it, extends more than half its length; the upper side of the head and the front, are rusty; on the neck, there

there is an half-collar variegated with black and rufous; all the rest of the plumage above is brown, shaded with rufous; on each side of the head behind the eyes, there is a pretty large spot; the throat is orange, and the rest of the lower surface of the body is spotted with black on a rufous white ground; the bill and feet are black.

The habitudes of this species are the same with those of all the birds of the same genus found in the New Continent: they reside in the most sequestered parts of the forests, and constantly remote from dwellings, and even tilled grounds: they never appear in flocks, or in pairs: they fly laboriously, and to short distances, and never alight but on low branches, preferring such as are thickest clothed with leaves: they have little vivacity, and, when once seated, they remain a long time. By sinking their large head between their shoulders, it seems to cover all the fore part of the body. Their disposition corresponds exactly to their awkward figure and serious deportment. They are so unwilling to move, that a person may advance and fire several times, without driving them to flight. Their flesh is not bad, though they live on caterpillars and other large insects.

Specific character of the *bucco-tamatia*:---“It is rufous brown; below rufous white, spotted with black; its throat orange; it is half-collared.” Synonymses.---*Bucco-tamatia*, *Gmel.* *Tamatia Brasiliensis*, *Marcg.* *Tamatia guacu*, *Pison.* Spotted-bellied barbet, *Lath.*

THE RED-HEADED BARBET.

THE head and throat of this species are red; the cheeks and all the under surface of the body black; the bill blackish, and the feet cinereous. It has also a small white spot above the eyes, and white spots on the wings. These birds are found in Guiana, in St. Domingo, and probably in most other hot climates of

America. Specific character of the *bucco Cayanensis*: It is black, below ochry-white, its front and throat red." Synonymes.--Bucco-Cayanensis. Gmel. and Briss. Cayanne barbet, Lath.

THE COLLARED BARBET.

THE plumage of this bird is agreeably variegated; the underside of the body is deep orange, striped transversely with black lines; about the neck there is a collar, which is very narrow above, and so broad below as to cover all the top of the breast; and this black collar is accompanied with a half collar of a tawny colour; the throat is whitish; the lower part of the breast is rusty white, which constantly inclines more to rufous as it descends under the belly; the tail is two inches and upwards in length, and the whole bird measures seven inches and a quarter, its bill an inch and five lines, and the legs, which are grey, seven and a half lines in height. It is found in Guiana, but is a rare species.

Specific character of the *bucco Capensis*:---"It is rufous, with a fulvous stripe on its shoulder, a black stripe on its breast." Synonymes.--Bucco Capensis, Linn. and Gmel. Bucco, Briss. Collared barbet, Lath.

THE ELEGANT BARBET.

THIS bird is certainly the most beautiful of the genus: it is better made, smaller, and more slender, than the rest, and its plumage is so variegated that it would be difficult to give an exact description. It is five inches eight lines in length, including the tail, which is near two inches; the bill measures ten lines, and the legs the same. It is found on the banks of the Amazon river, in the country of the Maynas: but we are informed that it inhabits equally the other parts of South America. Synonymes.---Bucco elegans, Gmel. Bucco Mayanensis, Briss. Beautiful barbet, Lath.

THE

THE BLACK BARBET.

THE bill of this species is stronger, thicker, and longer, than in most others; the upper mandible is also very hooked, and terminates in two points. Specific character: It is black; its front, the tips of its tail-quills, and the under-side of its body, are white; it has a black stripe on its breast." Synonymes,---*Bucco macrorynchos*, *Gmel.* Greater pied barbet, *Latb.*

THE YELLOW-THROATED BARBET.

ITS length is seven inches; the tail only eighteen lines; the bill twelve or thirteen lines, and the legs eight lines: the head is red, and also the breast; the eyes are encircled by a large yellow spot; the throat is pure yellow, the rest of the under side of the body yellowish, variegated with longitudinal spots of dull green. The female is smaller than the male; and has no red on the head or breast. They are found in the Philippines.

Specific character of the *bucco Philippensis*:---"It is green, the top of the head (of the male), the space about the eyes, the throat, and the under side of the body, yellow." Synonyme,---*Bucco Philippensis*, *Gmel.* and *Briss.*

THE BLACK-THROATED BARBET.

THIS species, which, as well as the preceding, is found in the Philippine islands, is yet a very different bird. It is thus described by Sonnerat: "This bird is rather larger and particularly longer than the gros-beak of Europe; the front or fore part of the head is of a beautiful red; the crown, the back of the head, the throat, and the neck, are black; there is also, above the eye, a semi-circular black stripe, which is continued by another one, straight and white, that descends to the lower part of the neck on the side; below the yellow stripe and the white one, which continues it, there is

430 NATURAL HISTORY

is a black vertical stripe, and between this and the throat there is a white longitudinal stripe, that is lost at its base in the breast, which, as well as the belly, the sides, and the upper surface of the tail, is white; the middle of the back is black, but the feathers on the side, between the neck and the back, are black, speckled each with a streak of yellow; the four first, including the stump, are tipped with white, and the fifth with yellow, which forms a cross stripe on the top of the wing; below this stripe, are black feathers, speckled each with a yellow point; the last feathers which cover the great quills of the wing, are likewise entirely black; but the others have over their whole length, on the side where the webs are longest, a yellow fringe; the tail is black in the middle, tinged with yellow on the sides; the bill and feet are blackish."

Specific character of the *bucco niger* :--- "It is black, below white; a yellow streak above the eye produced on either side to the neck; a white collar." Synonymes,---*Bucco niger*, *Gmel.*

THE BLACK-BREASTED BARBET.

THIS species comes from the Cape of Good Hope. It is six inches and a half long; its tail eighteen lines; its feet eight or nine lines. It is of a middle size; its plumage is agreeably mingled and contrasted with black and white; its front is red; there is a yellow line on the eye, and drops of a bright shining yellow scattered on the wings and the back; the same yellow tinge extends in dashes to the rump; and the quills of the tail, and the middle ones of the bill, are slightly fringed with the same colour; a black plate covers the breast as far as the neck; the back of the head is also enveloped in black, and a black bar between two white ones descends on the side of the neck. Synonymes. ---*Le barbu à plastron noir*, *Buff.* *Bucco niger*, *Var.* *Gmelin.*

THE

THE LITTLE BARBET.

THIS is the smallest species in the genus; and comes from Senegal. It is only four inches long: its large head and thick bill shaded with long bristles, sufficiently characterize it. Its tail is short, and its wings, when closed, reach almost to its extremity; all the upper side of the body is of a blackish brown, shaded with fulvous, and tinged with green on the quills of the wing and of the tail; some small white waves form fringes on the former: the under side of the body is whitish, with some traces of brown; the throat is yellow, and from the corners of the bill a small white bar passes under the eyes.

Specific character of the *bucco parvus*:---“It is blackish brown, below, white, spotted with brown; throat yellow.” Synonyme.---*Bucco parvus*, *Gmel.*

THE CHINESE BARBET.

THIS bird is near eleven inches long. The principal colour in its plumage is a fine green, which mingles with other colours on different parts of the body, and especially on the head and neck: the head entirely, and the fore part of the neck, are green mixed with blue; so that they appear green or blue, according to their exposure to the light; the origin of the neck, and that of the back, are of a chesnut brown, which varies also in different aspects, being intermingled with green; all the upper side of the body is of a very fine green, except the great quills of the wings, which are partly black; all the under side is of a much lighter green; there are some feathers below the tail, which are of a very fine red: the bill is ten lines in length, and an inch broad at the base, where there are black hard bristles; it is whitish, but black at the point: the wings are short, and scarcely reach the middle of the tail. This bird comes from China.

Spe-

Specific character of the *bucco grandis*:---“It is green, the lower coverts of its tail red.” Synonyme. ---*Bucco grandis*, *Gmel.*

THE GREEN BARBET.

IT is six inches and a half long; the back, the coverts of the wings and of the tail, are of a very fine green; the great quills of the wing are brown, but that colour is not seen, being hid by the coverts of the wings; the head is brown grey; the neck is the same colour, but each feather is edged with yellowish, and above and behind the eye, there is a white spot; the belly is of a much paler green than the back; the bill is whitish, and the base of the upper mandible is surrounded with long black and hard hairs; the bill is an inch and two lines in length, and seven lines broad at its base; the wings are short, and reach only the middle of the tail. It is a native of the East Indies.

Specific character of the *bucco viridis*:---“It is green, its head and neck grey-brown, the space about its eyes white.” Synonyme. ---*Bucco viridis*, *Gmel.*

THE ASIATIC BARBET.

THE toes of this bird are disposed two before, and two behind; and it is remarkable for its large bill, and the very long bristles which shoot from the base of the bill, and extend considerably beyond the nostrils; the shape of the bill is also peculiar; the upper mandible being pointed, and hooked at its extremity, with two blunt indentings on each side; the lower mandible is striped transversely with small furrows; the whole is reddish, and curved downwards. The plumage is black on all the upper part of the body, the top of the breast and belly; and red on the rest of the under surface, nearly as in the first species. It is nine inches long; the tail three inches and a half; the bill eighteen lines long and ten thick, and the legs are only an inch high; so that the bird can hardly walk. It is a native of

of Barbary. Specific character of the *bucco dubius*: "It is black, below red; the bar on its breast, and its vent, black." Synonymes.---*Bucco dubius*, *Gmel.* Doubtful barbet, *Lath.*

The newly-discovered species are; the buff-faced barbet, *bucco Lathamii*. The red-crowned barbet, *bucco rubricapillus*; from Ceylon. Yellow-cheeked barbet, *bucco Zeylonicus*. It is green; its head and neck pale brown; the coverts of its wings spotted with white. It inhabits Ceylon: it sits on trees murmuring like the turtle-dove; and is thence named by the natives, *kottorea*. White-breasted barbet, *bucco fuscus*, from Cayenne; size of a lark. Blue barbet, *bucco gerini*; from India.

CUCULUS, THE CUCKOO.

THIS singular though well-known bird, is the fourteenth genus in the order of picæ; and there are no less than forty-eight species, besides varieties. They occur in both continents; and their generic characters are as follow: Bill somewhat taper. Nostrils slightly protuberant at the margin. Tongue arrow-shaped, flat, entire; feet scansory. Called in Hebrew, according to the different authors, *kaath*, *kik*, *kakik*, *kakata*, *schalac*, *schaschaph*, *kore*, *banchem*, *euchem*; in Syriac, *coco*; in Greek, *κουκουξ*; in Latin, *cuculus*; in Italian, *cucculo*, *cucco*, *cuco*, *cucho*; in Spanish, *cucillo*; in German, *kukkuk*, *gucker*, *guggauch*, *gugckußer*; in Flemish, *kockok*, *kockunt*, *kockuunt*; in Swedish, *gioek*; in Norwegian, *gouk*; in Danish, *gioeg-kukert*, *kuk*, *kukmanden*; in Lapponic, *grecka*, in old English and in Scotch, *gowk*.

THE COMMON CUCKOO.

THE common cuckoo weighs about five ounces; and is in length fourteen inches, in breadth twenty-five. The bill is black, and about two-thirds of an

inch in length. The head, hind part of the neck, coverts of the wings, and rump, are of a dove colour; darker on the head and paler on the rump. The throat and upper part of the neck are of a pale grey; the breast and belly white, crossed elegantly with undulated lines of black. The tail consists of ten feathers of unequal lengths; the two middle tail-feathers are black tipped with white; the others are marked with white spots on each side their shafts. The legs are short; and the toes disposed two backwards and two forwards, like those of the wood-pecker, though it is never observed to run up the sides of trees. The female differs in some respects. The neck before and behind is of a brownish red; the tail barred with the same colour and black, and spotted on each side the shaft with white. The young birds are brown mixed with black, very much like the hawk, and in that state have been described by some authors as old ones.

This bird appears in our country early in the spring, and makes the shortest stay with us of any bird of passage. It is compelled here, as Mr. Stillingfleet observes, by that constitution of the air which causes the fig-tree to put forth its fruit; though it has been supposed that some of these birds do not quit this island during the winter; but that they seek shelter in hollow trees, and lie torpid unless animated by unusually warm weather. Mr. Pennant gives two instances of their being heard in February; one in 1771, in the end of that month; the other in 1769, on the 4th; but after that they were heard no more, being probably chilled again into torpidity. There is a remarkable coincidence between the song of these birds and the mackarels continuing in full roe; that is, from about the middle of April to the latter end of June. The cuckoo is silent for some time after his arrival; his note is a call to love, and used only by the male, who sits perched generally on some dead tree or bare bough, and repeats his song, which he loses as soon as the amorous season

is over. His note is so uniform, that his name in all languages seem to have been derived from it; and in all countries it is used with the same reproachful sense:

The plain-song *cuckoo* grey,
Whose note full many a man doth mark,
And dares not answer nay. *Shakespeare.*

The reproach seems to arise from the cuckoo's making use of the bed or nest of another to deposite its eggs in, leaving the care of its young to a step-mother, or unnatural parent; but Juvenal, with more justice, gives the infamy to the bird in whose nest the suppositious eggs were laid:

Tu tibi nunc corruca places.

A passage from an Italian author, Gerini, will illustrate the misapplication of the name cuckoo. "It lays its eggs in the nest of the *curruca* (pettychaps); and hence a sottish husband, indifferent to the dishonour of his marriage-bed and the imposition of spurious children, has been called *curruca*: and afterwards that name was corrupted, from ignorance, into *cornuto* (horned). Formerly, and even at present, this word, as well as cuckoo (cuckold), is bestowed on a sot, who is insensible to shame." The Latins applied the word *cuculus* to a husband who was unfaithful to his bed; and among the Greeks, it was bestowed on those caught in any disgraceful action, or on persons lazy and slothful. In general, the term conveyed an imputation of indolence and stupidity; in which sense it is still used among some nations in Europe. (*Silly Gowk* is to this day an expression of reproach among the populace in Scotland.)

On the natural history of this singular bird, a vast deal has been written; out of which we shall select the most curious and interesting facts.

In the age of Aristotle it was generally said that no one had ever seen the hatch of the cuckoo: it was known that this bird lays like the rest, but makes no

enst; that it drops its eggs, or its egg (for it seldom deposits *two* in the same place), in the nests of other birds, whether larger or smaller than itself, such as the warblers, the green-finches, the larks, the wood-pigeons, &c. that it often sucks the eggs which it finds, and leaves its own in their stead, to be hatched by the stranger; that this stranger acts the part of a tender mother to her supposititious brood, so that the young ones become very fat, plump, and good food; that even the adults are not bad eating in autumn; but there are countries where, at no period of their age, in no condition of their flesh, at no season of the year, they are ever eaten, being regarded as birds unclean and unlucky: in others they are held propitious, and venerated as oracles; and some countries there are, where it is imagined that the soil under the person's right foot, who first hears the cuckoo's note, is a certain preservative against flees and vermin; that their plumage changes much when they arrive at maturity; and lastly, that the cuckoos begin to appear and are heard early in the spring; that they are feeble on their arrival; that they are silent during the dog days; and that a certain species of them build in craggy rocks. Such are the principal facts in the history of the cuckoo which were known two thousand years ago. It was also asserted by the ancients, that the cuckoo is nothing else than a little sparrow-hawk metamorphosed; that this change is effected every year at a certain stated season; that, when it appears in the spring, it is conveyed on the shoulders of the kite, which, to assist the weakness of its wings, is so obliging as to carry it; that it discharges upon plants a saliva which proves pernicious to them by engendering insects; that the female cuckoo takes care to lay into each nest she can discover, an egg like those contained in it, the better to deceive the mother; that the mother nurses the young cuckoo, and sacrifices her own brood to it, because they appear not so handsome; that, like a true
step.

step-mother, she neglects them, or kills them, and directs the intruder to eat them. Some supposed that the female cuckoo returned to the nest where she had deposited her egg, and expelled or devoured the other young, that her own might fare the better: others fancied that the little pretender destroyed its foster-brothers, or rendered them victims to its voracity, by seizing exclusively all the food provided by their common nurse. Elian relates, that the young cuckoo, sensible that it is an intruder, and afraid of being betrayed by its plumage and treated as such, flies away as soon as it can use its wings, and joins its real mother. Others pretend that the nurse discovers the fraud from the colour of its plumage, and abandons the intruder. Others again imagined that the young bird, before it flies, devours even its second parent, which had given it every thing but life; and the cuckoo has hence been made the great symbol of ingratitude. "Ungrateful as a cuckoo," say the Germans. Melancthon has left a fine harangue on the ingratitude of this bird. But it is absurd to impute crimes to it that are physically impossible. Upon all these supposititious properties in the cuckoo, the Count de Buffon has made many ingenious remarks, which we shall now proceed to state.

With respect to the saliva of the cuckoo, it is nothing else than a frothy exudation from the *larva* of a certain kind of grasshopper. This insect is the *cicada spumaria* of Linnæus. It is frequent on brambles, withies, and grass stalks; it settles in the forking of the stalks, and evacuates numerous vesicles, resembling froth, under which the larva lies concealed. This spittle, so frequent in the fields, is well known by the name of *cuckoo-spittle*. Perhaps the cuckoo was observed to seek the larva under this froth, which might give occasion to its being supposed to deposit its saliva; and, as an insect was perceived to emerge, it
would

would be imagined, that the saliva of the cuckoo engendered vermin.

The notion that the cuckoo is annually metamorphosed into a sparrow-hawk, seems to have taken its rise from the following circumstances: the two birds are seldom found in our climates at the same time; they resemble each other in their plumage, in the colour of their eyes and legs, in the length of their tail, in having a membranous stomach and a long tail, in their size, in their flight, and in their little fecundity; both live solitary, and their plumage is also subject to vary, so that a bird which was taken for a beautiful merlin from its colours, was found on dissection to be a female cuckoo. But these qualities are not what constitute a bird of prey; there are wanting the proper bill and talons, and the requisite courage and strength, in which the cuckoo, considering its bulk, is very deficient.

The well-ascertained fact, that it lays in another's nest, is the chief singularity in its history, though not altogether unexampled. Gesner speaks of a certain bird of prey, which is much like the goshawk, that lays in the nest of the jackdaw: and though this unknown bird should be supposed to be nothing but the cuckoo, especially as this is often taken for one of the rapacious tribe; it at least cannot be denied that the wry-necks sometimes raise their numerous progeny in the nest of the nut-hatch; that the sparrows sometimes occupy the swallows nests, &c. These instances, however, are rare; and the conduct of the cuckoo must be regarded rather as an extraordinary phenomenon. Another singularity in its history is, that it drops only one egg, at least in the same nest. It may indeed lay more eggs, as Aristotle supposes, and which appears probable from the dissection of the females. These two singularities seem to imply a third: it is that their moulting is slower and more complete than in most birds. Sometimes in the winter season we find,

find, in the hollows of trees, one or two cuckoos entirely naked, insomuch that they may be taken for real toads. Father Bougaud, an author of credit, avers that he saw one in that state, which was taken out of a hollow tree about the end of December. Of four other cuckoos, raised by Johnson, as mentioned by Willoughby, the other by the Count de Buffon, Herbert, &c. the first languished on the approach of winter, grew scabby, and died; the second and third cast the whole of their feathers in November, and the fourth, which died towards the end of October, had lost more than half. The second and third also soon died; but, previous to their death, they fell into a kind of numbness and torpor. Many other similar facts are adduced; and though it has been erroneously concluded, that *all* the cuckoos which make their appearance in summer, remain torpid during the winter, concealed in hollow trees or under ground, disrobed of their plumage, and, according to some, with an ample provision of corn: if these conclusions ought not to be wholly admitted, we may at least safely infer that those which on the moment of their departure are sick or wounded, or too young, or in short too weak, from whatever cause, to perform their distant retreat, remain behind, and pass the winter sheltered in the first hole they meet with which has a good aspect, as do the quails. In general, these birds are very late in moulting, and consequently slow in resuming their plumage, which is hardly restored on their appearance in the beginning of spring; accordingly, their wings are then very weak, and they seldom perch on lofty trees, but struggle from bush to bush, and sometimes alight on the ground, where they hop like the thrushes. We may therefore say that, during the love season, the surplus food is almost entirely spent on the growth of the feathers, and can furnish very little towards the reproduction of the species; and that, as the bird has little abilities for generation, it has also less ardour for all the subordi-

subordinate functions, which have the preservation of the species as their object, such as nestling, hatching, and rearing their young, &c. which all originate from the same source, and are proportioned to it. Besides, as the male instinctively devours birds eggs, the female must be careful to conceal hers; she must not return to the spot where she has deposited one, lest the male discover it; she must therefore choose the most concealed nest, and which is also the most remote from his usual haunts; and, if she has two eggs, she must entrust them to different nurses: and thus she takes all the precautions suggested by concern for her progeny, and yet carefully avoids betraying it through indiscretion. Viewed in this way, the conduct of the cuckoo will coincide with the general rule, and imply in the mother an affection for her young, and even a rational kind of concern, which prefers their interest to the tender satisfaction of fondling and assisting them by her offices. The dispersion too of the eggs in different nests, whatever be the cause, whether the necessity of concealing them from the male, or the smallness of the nest, would alone render it impossible for the female to hatch them. This fact is the more probable, as two eggs are often found completely formed in the ovarium, but very seldom two eggs in the same nest. Besides, the cuckoo is not the only bird which never builds; many species of titmice, wood-peckers, kingfishers, &c. come under the same description. We have already seen that it is not the only one that lays in other's nests; there is also another example of a bird which never hatches its eggs; the ostrich, in the torrid zone, deposits its eggs in the sand, and the heat of the sun accomplishes the developement of the embryos. It never loses sight of them indeed, and guards them assiduously; but it has not the same motives as the cuckoo to conceal its attachment, and therefore does not take all the precautions which might exempt it from farther solicitude. The conduct of the cuckoo

is not then an absurd irregularity, a monstrous anomaly, a deviation from the laws of nature, as Willoughby expresses it; it is the necessary consequence of established principles, and the want of it would occasion a void in the general system, and interrupt the chain of phenomena.

What seems to have astonished some naturalists the most, is that attention which they term unnatural in the nurse of the cuckoo, which neglects its own eggs to cherish those of a foreign, and even hostile, bird. One of these, a respectable ornithologist, struck with the appearance, has made a series of observations on this subject: he took the eggs of several small birds out of their nests, and in their place substituted a single egg of a bird of a different kind, and not a cuckoo; and he inferred from his experiments, that, in similar circumstances, birds will hatch no single egg but the cuckoo's, which is therefore favoured by a special law of the Creator. But this conclusion will appear rash and precarious, if we attend to the following considerations: 1. The assertion being general, one contrary fact is sufficient to overturn it; and for this reason, 46 experiments made on twenty species are too few. 2. It would require many more, and those performed with greater nicety, to establish a proposition which is an exemption to the general laws of nature. 3. Admitting the experiments to be sufficiently numerous and accurate, they would be inconclusive, if not made precisely in the same manner, and in like circumstances. For instance, the case is not similar when the egg is left by a bird or dropped by a man, especially by one who is biased to a favourite hypothesis; nay, the frequent appearance of a person will disturb the most eager brooder, and even cause her to abandon the education of a cuckoo, though far advanced. 4. The fundamental assertions of this author are not quite accurate; for, though it seldom happens, yet the cuckoo sometimes lays two eggs in the same nest. Further he

supposes that the cuckoo sucks all the eggs in the nest, or destroys them somehow, leaving only its own; but this is not the fact; for there are incontestible proofs observed by persons attached to no hypothesis, which are directly opposite to those related by the author, and entirely overturn his inductions.

FIRST EXPERIMENT.---A hen canary, which sat on her eggs and hatched them, continued to sit when two black-birds eggs, brought from the woods, were put under her, though eight days afterwards; and the incubation would have succeeded if they had not been removed.

SECOND EXPERIMENT.---Another hen canary sat four days on seven eggs, five of which were her own, and two those of a pettychaps; but, the cage being carried to the lower story, she forsook them all. Afterwards she laid two eggs, but did not sit.

THIRD EXPERIMENT.---Another hen canary, whose mate had eaten her seven first eggs, sat on the two last, along with three others, the one a canary's, the second a linnet's, and the third a bulfinch's; but all these happened to be addle.

FOURTH EXPERIMENT.---A hen wren hatched a blackbird's egg; and a hen tree-sparrow hatched a magpie's egg.

FIFTH EXPERIMENT.---A hen tree-sparrow sat on six eggs which she had laid; five were added, and she still sat; five more were added, and, finding the number too large, she ate seven of them, and continued to sit on the rest; two were taken away, and a magpye's egg put in their place, and the sparrow hatched it, along with the seven others.

SIXTH EXPERIMENT.---There is a well-known method of hatching canaries' eggs, by putting them under a hen goldfinch, taking care that they are previously as far advanced in their incubation as those of the goldfinch.

SEVENTH

SEVENTH EXPERIMENT.---A hen canary having sat nine or ten days on three of her own eggs and two of those of the blackcap, one of the latter was removed, in which the embryo was not only formed, but living; two young yellow buntings, just hatched, were entrusted to her, and she treated them with the same attention as she would do her own, and still continued to sit on the four eggs that were left, but they turned out to be addle.

EIGHTH EXPERIMENT.---About the end of April 1776, another hen canary having laid an egg, it was taken away; and three or four days after, it being replaced, the bird ate it. Two or three days afterwards, she laid another egg, and sat on it; two chaffinch's eggs were then put under her, and she continued to sit, though she had broken her own eggs; at the end of ten days the chaffinch's eggs were removed, being tainted. Two newly-hatched yellow buntings were given, which she reared very well. After this she laid two eggs, ate one, and, though the other was taken away, she continued to brood as if she had eggs; a single egg of the redbreast was put under her, which she hatched successfully.

NINTH EXPERIMENT.---Another hen canary, having laid three eggs, broke them almost immediately; two chaffinch's eggs, and one of the blackcap, were substituted, on which she sat, and on three others which she laid successively. In four or five days, the cage having been carried to a room in the lower story, the bird forsook them. A short time afterwards, she laid an egg, to which was joined one of the nut-hatch, and then two others, to which a linnet's egg was added. She sat on them all seven days, but, preferring the two strangers, she threw out her own successively on the three following days, and on the eleventh she also tossed out that of the nut-hatch, so that the linnet's was the only one that succeeded. If this last egg had been that of a cuckoo, what false inferences might have been drawn!

TENTH EXPERIMENT:---On the 5th of June, a cuckoo's egg was placed under the hen canary mentioned in the seventh experiment, which she hatched, along with three of her own. On the 7th, one of these eggs disappeared; another on the 8th, and the third and last on the 10th; on the 11th, she also ate the cuckoo's egg. Lastly, a hen red-breast, ardently bent on brooding, had been seen to unite with her mate in repelling a female cuckoo from the nest; they screamed, attacked furiously, and hotly pursued her. While one of the red-breasts was striking with its bill the lower belly of the cuckoo, this bird shivered its wings with an almost insensible quiver, opened its bill so wide that another red-breast, which assailed it in front, drove its head several times into the cavity, without receiving any injury; for the cuckoo was no way irritated, but seemed to be in the condition of a female under the necessity of laying. In a little while the cuckoo, being exhausted, began to totter, lost its balance, and turned on the branch, from which it hung by the feet, its eyes half-shut, its bill open, and its wings expanded. Having remained about two minutes in this attitude, constantly harassed by the two red-breasts, it quitted the branch, flew to perch at a distance, and appeared no more. The female red-breast resumed her incubation, and all her eggs were hatched, and formed a little family, that long lived attached to the district."

It follows from these experiments, 1. That the females of many species of small birds which hatch the cuckoo's egg, hatch likewise other eggs along with their own. 2. That they often sit on these eggs in preference to their own, which they sometimes entirely destroy. 3. That they will hatch a single egg, though it be not a cuckoo's. 4. That they boldly drive off the female cuckoo, when they find her dropping the egg in their nest. 5. That they sometimes eat this favoured egg, even in cases where it is single and alone.

But

But a more general and important consequence is, that the instinct of hatching, which sometimes appears so powerful in birds, is not determined by the kind or quality of the eggs; since they often eat or break them, or sit on addle ones; they sit even on balls of chalk or wood, and sometimes brood in the empty nest. When a bird hatches the egg of a cuckoo, or of any other bird, she follows therefore the general instinct; and it is unnecessary to recur to any special appointment of the Author of Nature in accounting for the conduct of the female cuckoo.

The reader will pardon this long discussion, of the importance of which he may not on the first view be convinced. The bird which is the subject of this article has given rise to so many errors, that it is necessary not only to extirpate these from natural history, but to oppose the attempts of those who endeavour to convert them into metaphysical principles. Nothing is more inconsistent with sound philosophy, than to multiply the laws of the universe; a phænomenon appears single and unconnected, because it is not accurately known; and it requires an attentive comparison of the works of nature, a close investigation of the relations which subsist, to enable us to penetrate her views.

Buffon enumerates more than twenty species of birds, in the nests of which the cuckoo deposits her eggs: the pettychaps, the blackcap, the babbling warbler, the wagtail, the red-breast, the common wren, the yellow wren, the titmouse, the nightingale, the red-tail, the sky-lark, the wood-lark, the tit-lark, the linnet, the greenfinch, the bulfinch, the throistle, the jay, the black-bird, and the shrike. The cuckoo's eggs are never found in the nests of partridges or quails, at least they never succeed in them, because the young of these birds run almost the instant they are hatched. It is even singular that the young cuckoos, which, when bred in the cage, require several months before they eat without assistance, can ever be raised in the nests
of

of larks, which bestow only fifteen days on their education. But in the state of nature, necessity, liberty, and the proper choice of food, will conspire to unfold their instinct, and hasten their growth; and may not the attention of the nurse be proportioned to the wants of her adopted child?

We shall perhaps be surprised to find many granivorous birds, such as the linnet, the greenfinch, and the bulfinch, in the list of the cuckoo's nurses. But many of these, it should be remembered, feed their brood with insects; and even the vegetable substances may suit the cuckoo for a certain time, till it can pick up caterpillars, spiders, and beetles, &c. which swarm about its mansion. When the nest, where it is lodged, belongs to a small bird, and consequently is constructed on a narrow scale, it is usually found so much flattened that it can hardly be recognised; the natural effect of the bulk and weight of the young cuckoo. Another consequence is, that the eggs or young birds are frequently thrust out of the nest; but, though expelled from their paternal abode, they sometimes survive; for if they be somewhat grown, if the nest be near the ground, and if the aspect is favourable and the season mild, they find shelter under the moss or foliage, and the parents, without forsaking the intruder, continue to feed and watch them.

All the inhabitants of forests assert, that, when the female cuckoo has once deposited her egg in the nest which she has selected, she retires to a distance, and seems to forget her progeny; and that the male never discovers the smallest concern in the matter. The Comte de Buffon says, it is also very uncertain whether these birds ever pair; they are stimulated by appetite, but they shew nothing like sentiments or attachment. The males are much more numerous than the females, and often contend for them; yet the object of the struggle is a female in general, without any symptom of choice or predilection; and, when their
passion

passion is satisfied, they desert her with the coldest indifference. They discover no solicitude, and make no provision, for their offspring. The mutual attachment between parents is founded on the common tenderness to their young.---Thus far the Comte de Buffon: we shall now entertain and instruct the reader, fond of pursuing these unbeaten tracks of nature in her peaceful and more retired abodes, from the very curious observations of our own countryman, Mr. Jenner, a gentleman of Gloucestershire, who published his remarks in the Philosophical Transactions, part ii. for 1788. He states as follows:

The first appearance of cuckoos in this country, (as already observed,) is about the middle of April; (the 17th, according to Mr. Jenner, whose observations were made in Gloucestershire.) The song of the male, which is well known, soon proclaims its arrival. The song of the female (if the peculiar notes of which it is composed may be so called) is widely different, and has been so little attended to, that perhaps few are acquainted with it: the cry of the dab-chick bears some resemblance to it. Unlike the generality of birds, they do not pair. When a female appears on the wing, she is often attended by two or three males, who seem to be earnestly contending for her favours. From the time of her appearance till after the middle of summer the nests of the birds selected to receive her egg are to be found in great abundance; but, like the other migrating birds, she does not begin to lay till some weeks after her arrival.

It is on all hands allowed, that the cuckoo does not hatch its own eggs; for which different reasons have been given. The hedge-sparrow, the water-wagtail, the titlark, the red-breast, the yellow-hammer, the green-linnet, or the winchat, is generally the nurse of the young cuckoo in England. It may be supposed, that the female cuckoo lays her egg in the absence of the bird in whose nest she intends to deposit; as we have

have seen, that on sight of one of these a redbreast and its mate jointly attacked her on approaching the nest, putting her to flight; and so effectually drove her away, that she did not dare return. Among the birds above-mentioned, it generally, according to Mr. Jenner's observations, selects the three first, but shews a much greater partiality to the hedge-sparrow. This last commonly takes up four or five days in laying her eggs. During this time (generally after she has laid one or two) the cuckoo contrives to deposite her egg among the rest, leaving the future care of it entirely to the hedge-sparrow. This intrusion often occasions some discomposure: for the old hedge-sparrow at intervals, whilst she is sitting, not unfrequently throws out some of her own eggs, and sometimes injures them in such a way that they become addle; so that it frequently happens that only two or three hedge-sparrows eggs are hatched with the cuckoo's. But whether this be the case or not, she sits the same length of time as if no foreign egg had been introduced, the cuckoo's egg requiring no longer incubation than her own.

When the hedge-sparrow has sat her usual time, and disengaged the young cuckoo and some of her own offspring from the shell, her own young ones, and any of her eggs that remain unhatched, are soon turned out, the young cuckoo remaining possessor of the nest, and sole object of her future care. The young birds are not previously killed, nor are the eggs demolished; but all are left to perish together, either entangled about the bush which contains the nest, or lying on the ground under it.

"The early fate of the young hedge-sparrow (says Mr. Jenner) is a circumstance that has been noticed by others, but attributed to wrong causes. A variety of conjectures have been formed upon it. Some have supposed the parent cuckoo the author of their destruction; while others, as erroneously, have pronounced them smothered by the disproportionate size of their fellow-

fellow-nestling. Now the cuckoo's egg being not much larger than the hedge-sparrow's (as I shall more fully point out hereafter), it necessarily follows, that at first there can be no great difference in the size of the birds just burst from the shell. Of the fallacy of the former assertion also I was some years ago convinced, by having found that many cuckoos eggs were hatched in the nests of other birds after the old cuckoo had disappeared, and by seeing the same fate then attend the nestling sparrows as during the appearance of old cuckoos in this country. But, before I proceed to the facts relating to the death of the young sparrows, it will be proper to mention some examples of the incubation of the egg, and the rearing of the young cuckoo; since even the well-known fact, that this business is intrusted to the care of other birds, has been controverted by the Hon. Daines Barrington, who has lately written on this subject; and since, as it is a fact so much out of the ordinary course of nature, it may still probably be disbelieved by others.

"EXAMPLE 1. The titlark is frequently selected by the cuckoo to take charge of its young one; but, as it is a bird less familiar than many that I have mentioned, its nest is not so often discovered. I have, nevertheless, had several cuckoos eggs brought to me that were found in titlarks nests, and had one opportunity of seeing the young cuckoo in the nest of this bird. I saw the old birds feed it repeatedly; and, to satisfy myself that they were really titlarks, shot them both, and found them to be so.

"EXAMPLE 2. A cuckoo laid her egg in a water-wagtail's nest in the thatch of an old cottage. The wagtail sat her usual time, and then hatched all the eggs but one; which, with all the young ones except the cuckoo, was turned out of the nest. The young birds, consisting of five, were found upon the rafter that projected from under the thatch, and with them was the egg not in the least injured. On examining the

egg, I found the young wagtail it contained quite perfect, and just in such a state as birds are when ready to be disengaged from the shell. The cuckoo was reared by the wagtails till it was nearly capable of flying, when it was killed by an accident.

“EXAMPLE 3. A hedge-sparrow built her nest in a hawthorn bush in a timber-yard. After she had laid two eggs, a cuckoo dropped in a third. The sparrow continued laying as if nothing had happened, till she had laid five, her usual number, and then sat. June 20, 1786. On inspecting the nest, (says Mr. Jenner), I found that the bird had hatched this morning, and that every thing but the young cuckoo was thrown out. Under the nest I found one of the young hedge-sparrows dead, and one egg by the side of the nest entangled with the coarse woody materials that formed its outside covering. On examining the egg, I found one end of the shell a little cracked, and could see that the sparrow it contained was yet alive. It was then restored to the nest, but in a few minutes was thrown out. The egg, being again suspended by the outside of the nest, was saved a second time from breaking. To see what would happen if the cuckoo was removed, I took out the cuckoo, and placed the egg containing the hedge-sparrow in the nest in its stead. The old birds, during this time, flew about the spot, shewing signs of great anxiety; but, when I withdrew, they quickly came to the nest again. On looking into it in a quarter of an hour afterwards, I found the young one completely hatched, warm, and lively. The hedge-sparrows were suffered to remain undisturbed with their new charge for three hours, (during which time they paid every attention to it,) and then the cuckoo was again put into the nest. The old sparrow had been so much disturbed by these intrusions, that for some time they shewed an unwillingness to come to it. However, at length they came; and on examining the nest again in a few minutes, I found the young
sparrow

sparrow was tumbled out. It was a second time restored, but again experienced the same fate.

“From these experiments, (continues Mr. Jenner,) and supposing, from the feeble appearance of the young cuckoo just disengaged from the shell, that it was utterly incapable of displacing either the egg or the young sparrows, I was induced to believe that the old sparrows were the only agents in this seeming unnatural business. But I afterwards clearly perceived the cause of this strange phenomenon, by discovering the young cuckoo in the act of displacing its fellow-nestlings, as the following relation will fully evince.

“June 18, 1787, I examined the nest of a hedge-sparrow, which then contained a cuckoo's and three hedge-sparrow's eggs. On inspecting it the day following, I found the bird had hatched, but that the nest now contained only a young cuckoo and one young hedge-sparrow. The nest was placed so near the extremity of a hedge, that I could distinctly see what was going forward in it; and, to my astonishment, saw the young cuckoo, though so newly hatched, in the act of turning out the young hedge-sparrow. The mode of accomplishing this was very curious. The little animal, with the assistance of its rump and wings, contrived to get the bird upon its back; and making a lodgement for the burden by elevating its elbows, clambered backward with it up the side of the nest till it reached the top; where, resting for a moment, it threw off its load with a jerk, and quite disengaged it from the nest. It remained in this situation a short time, feeling about with the extremities of its wings, as if to be convinced whether the business was properly executed, and then dropped into the nest again. With these (the extremities of its wings) I have often seen it examine, as it were, an egg and nestling before it began its operations; and the nice sensibility which these parts appeared to possess, seemed sufficiently to compensate the want of sight, which as yet it was des-

titute of. I afterwards put in an egg; and this by a similar process, was conveyed to the edge of the nest, and thrown out. These experiments I have since repeated several times in different nests, and have always found the young cuckoo disposed to act in the same manner. In climbing up the nest, it sometimes drops its burden, and thus is foiled in its endeavours; but, after a little respite, the work is resumed, and goes on almost incessantly till it is effected. It is wonderful to see the extraordinary exertions of the young cuckoo, when it is two or three days old, if a bird be put into the nest with it that it is too weighty for it to lift out. In this state it seems ever restless and uneasy. But this disposition for turning out its companions begins to decline from the time it is two or three till it is about twelve days old; when, as far as I have hitherto seen, it ceases. Indeed, the disposition for throwing out the egg appears to cease a few days sooner; for I have frequently seen the young cuckoo, after it had been hatched nine or ten days, remove a nestling that had been placed in the nest with it, when it suffered an egg, put there at the same time, to remain unmolested. The singularity of its shape is well adapted to these purposes; for, different from other newly-hatched birds, its back, from the scapulæ downwards, is very broad, with a considerable depression in the middle. This depression seems formed by nature for the design of giving a more secure lodgement to the egg of the hedge-sparrow or its young one when the young cuckoo is employed in removing either of them from the nest. When it is about twelve days old, this cavity is quite filled up, and then the back assumes the shape of nestling birds in general.

“Having found that the old hedge-sparrow commonly throws out some of her own eggs after her nest has received the cuckoo’s, and not knowing how she might treat her young ones if the young cuckoo was deprived

deprived of the power of dispossessing them of the nest, I made the following experiment :

“ July 9. A young cuckoo, that had been hatched by a hedge-sparrow about four hours, was confined in the nest in such a manner that it could not possibly turn out the young hedge-sparrows which were hatched at the same time, though it was almost incessantly making attempts to effect it. The consequence was, the old birds fed the whole alike, and appeared in every respect to pay the same attention to their own young as to the young cuckoo, until the 13th, when the nest was unfortunately plundered.

“ The smallness of the cuckoo's egg, in proportion to the size of the bird, is a circumstance that hitherto, I believe, has escaped the notice of the ornithologist. So great is the disproportion, that it is in general smaller than that of the house-sparrow ; whereas the difference in the size of the birds is nearly as five to one. I have used the term *in general*, because eggs produced at different times by the same bird vary very much in size. I have found a cuckoo's egg so light that it weighed only forty-three grains, and one so heavy that it weighed fifty-five grains. The colour of the cuckoo's eggs is extremely variable. Some, both in ground and penciling, very much resemble the house-sparrows ; some are indistinctly covered with bran-coloured spots ; and others are marked with lines of black, resembling, in some measure, the eggs of the yellow-hammer.

“ The circumstance of the young cuckoo's being destined by nature to throw out the young hedge-sparrows, seems to account for the parent cuckoo's dropping her egg in the nests of birds so small as those I have particularised. If she were to do this in the nest of a bird which produced a large egg, and consequently a large nestling, the young cuckoo would probably find an insurmountable difficulty in solely possessing the nest, as its exertions would be unequal to the labour
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of turning out the young birds. Besides, though many of the larger birds might have fed the nestling cuckoo very properly had it been committed to their charge, yet they could not have suffered their own young to have been sacrificed for the accommodation of the cuckoo in such great number as the smaller ones, which are so much more abundant; for, though it would be a vain attempt to calculate the numbers of nestlings destroyed by means of the cuckoo, yet the slightest observation would be sufficient to convince us that they must be very large."

Here Mr. Jenner remarks, that, though nature permits the young cuckoo to make this great waste, yet the animals thus destroyed are not thrown away or rendered useless. At the season when this happens, great numbers of tender quadrupeds and reptiles are seeking provision; and, if they find the callow nestlings which have fallen victims to the young cuckoo, they are furnished with food well adapted to their peculiar state.

It appears a little extraordinary, that *two* cuckoos eggs should *ever* be deposited in the same nest, as the young one produced from one of them must inevitably perish; yet two instances of this kind fell under the author's observation, one of which he thus relates: two cuckoos and a hedge-sparrow were hatched in the same nest this morning, June 27, 1787, when one hedge-sparrow's egg remained unhatched. In a few hours after, a contest began between the cuckoos for the possession of the nest, which continued undetermined till the next afternoon, when one of them, which was somewhat superior in size, turned out the other, together with the young hedge-sparrow and the unhatched egg. This contest was very remarkable. The combatants alternately appeared to have the advantage, as each carried the other several times nearly to the top of the nest, and then sunk down again, oppressed by the weight of its burden; till at length,
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after various efforts, the strongest prevailed, and was afterwards brought up by the hedge-sparrows."

But the principal circumstance that has agitated the mind of the naturalist respecting the cuckoo is, Why, like other birds, it should not build a nest, incubate its eggs, and rear its own young?

There is no apparent reason, Mr. Jenner thinks, why this bird, in common with others, should not perform all these several offices; for it is in every respect perfectly formed for collecting materials and building a nest. Neither its external shape nor internal structure prevent it from incubation; nor is it by any means incapacitated from bringing food to its young. It would be needless to enumerate the various opinions of authors on this subject from Aristotle to the present time. Those of the ancients appear to be either visionary or erroneous; and the attempts of the moderns towards its investigation have been confined within very narrow limits: for they have gone but little further in their researches than to examine the constitution and structure of the bird; and, having found it possessed of a capacious stomach with a thin external covering, concluded that the pressure upon this part, in a sitting posture, prevented incubation. They have not considered that many of the birds which incubate have stomachs analogous to those of cuckoos. The stomach of the owl, for example, is proportionably capacious, and is almost as thinly covered with external integuments. Nor have they considered, that the stomachs of nestlings are always much distended with food; and that this very part, during the whole time of their confinement to the nest, supports in a great degree the weight of the whole body: whereas, in a sitting bird, it is not nearly so much pressed upon, for the breast in that case fills up chiefly the cavity of the nest; for which purpose, from its natural convexity, it is admirably well fitted.

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These observations may be sufficient to shew, that the cuckoo is not rendered incapable of sitting through any peculiarity either in the situation or formation of the stomach; yet, as a proof still more decisive, our observer adduces the following fact. "In the summer of the year 1786, I saw, in the nest of a hedge-sparrow, a cuckoo, which, from its size and plumage, appeared to be nearly a fortnight old. On lifting it up in the nest, I observed two hedge-sparrows eggs under it. At first I supposed them part of the number which had been sat upon by the hedge-sparrow with the cuckoo's egg, and that they had become addle, as birds frequently suffer such eggs to remain in their nests with their young; but on breaking one of them I found it contained a living foetus; so that of course these eggs must have been laid some time after the cuckoo was hatched; as the latter now completely filled up the nest, and was by this peculiar incident performing the part of a sitting-bird. At this time I was unacquainted with the fact, that the young cuckoo turned out the eggs of the hedge-sparrow; but it is reasonable to conclude, that it had lost the disposition for doing this when these eggs were deposited in the nest.

"Having under my inspection, in another hedge-sparrow's nest, a young cuckoo about the same size as the former, I procured two wagtails eggs which had been sat upon a few days, and had them immediately conveyed to the spot, and placed under the cuckoo. On the ninth day after the eggs had been in this situation, the person appointed to superintend the nest (as it was some distance from the place of my residence) came to inform me that the wagtails were hatched. On going to the place, and examining the nest, I found nothing in it but the cuckoo and the shells of the wagtail's eggs. The fact, therefore, of the birds being hatched, I do not give as coming immediately under my own eye; but the testimony of the person appointed

appointed to watch the nest was corroborated by that of another witness."

In considering to what causes may be attributed the singularities of the cuckoo, Mr. Jenner suggests the following as the most probable: "The short residence this bird is allowed to make in the country where it is destined to propagate its species; and the call that nature has upon it, during that short residence, to produce a numerous progeny." The cuckoo's first appearance here is about the middle of April. Its egg is not ready for incubation till some weeks after its arrival, seldom before the middle of May. A fortnight is taken up by the sitting-bird in hatching the egg. The young bird generally continues three weeks in the nest before it flies, and the foster-parents feed it more than five weeks after this period; so that, if a cuckoo should be ready with an egg much sooner than the time pointed out, not a single nestling, even one of the earliest, would be fit to provide for itself before its parent would be instinctively directed to seek a new residence, and be thus compelled to abandon its young one; for old cuckoos take their final leave of this country the first week in July.

"Had nature allowed the cuckoo to have staid here as long as some other migrating birds, which produce a single set of young ones (as the swift or nightingale, for example), and had allowed her to have reared as large a number as any bird is capable of bringing up at one time, these might not have been sufficient to have answered her purpose; but, by sending the cuckoo from one nest to another, she is reduced to the same state as the bird whose nest we daily rob of an egg, in which case the stimulus for incubation is suspended. Of this we have a familiar example in the common domestic fowl. That the cuckoo actually lays a great number of eggs, dissection seems to prove very decisively. Upon a comparison I had an opportunity of making between the ovarium, or racemus vitellorum,

458 NATURAL HISTORY

of a female cuckoo, killed just as she had begun to lay, and of a pullet killed in the same state, no essential difference appeared. The uterus of each contained an egg perfectly formed, and ready for exclusion; and the ovarium exhibited a large cluster of eggs, gradually advanced from a very diminutive size to the greatest the yolk acquires before it is received into the oviduct. The appearance of one killed on the 3d of July was very different. In this I could distinctly trace a great number of the membranes which had discharged yolks into the oviduct; and one of them appeared as if it had parted with a yolk the preceding day. The ovarium still exhibited a cluster of enlarged eggs, but the most forward of them was scarcely larger than a mustard-seed.

“I would not be understood to advance, that every egg which swells in the ovarium at the approach or commencement of the propagating season is brought to perfection; but it appears clearly, that a bird, in obedience to the dictates of her own will, or to some hidden cause in the animal economy, can either retard or bring forward her eggs. Besides the example of the common fowl above alluded to, many others occur. If we destroy the nest of a blackbird, a robin, or almost any small bird, in the spring, when she has laid her usual number of eggs, it is well known to every one who has paid any attention to inquiries of this kind, in how short a space of time she will produce a fresh set. Now, had the bird been suffered to have proceeded without interruption in her natural course, the eggs would have been hatched, and the young ones brought to a state capable of providing for themselves, before she would have been induced to make another nest, and excited to produce another set of eggs from the ovarium. If the bird had been destroyed at the time she was sitting on her first laying of eggs, dissection would have shewn the ovarium containing

taining a great number in an enlarged state, and advancing in the usual progressive order. Hence it plainly appears, that birds can keep back or bring forward (under certain limitations) their eggs at any time during the season appointed for them to lay; but the cuckoo, not being subject to the common interruptions, goes on laying from the time she begins till the eve of her departure from this country: for although old cuckoos in general take their leave the first week in July (and I never could see one after the 5th of that month, though I conceive it possible that here and there a straggling cuckoo may be seen after this time); yet I have known an instance of an egg's being hatched in the nest of an hedge-sparrow so late as the 15th. And a farther proof of their continuing to lay till the time of their leaving us may, I think, be fairly deduced from the appearances on dissection of the female cuckoo above-mentioned, killed on the 3d of July."

The growth of the young cuckoo is uncommonly rapid. Its chirp is plaintive, like that of the hedge-sparrow; but the sound is not acquired from the foster-parent, as it is the same whether it be reared by the hedge-sparrow or any other bird. It never acquires the adult note during its stay in this country. The stomachs of young cuckoos contain a great variety of food. On dissecting one that was brought up by wag-tails, and fed by them at the time it was shot (though it was nearly of the size and fulness of plumage of the parent bird), Mr. Jenner found in its stomach the following substances: flies and beetles of various kinds; small snails with their shells unbroken; grasshoppers; caterpillars; part of a horse-bean; a vegetable substance, resembling bits of tough grass, rolled into a ball; and the seeds of a vegetable that resembled those of the goose-grass. In the stomach of one fed by hedge-sparrows, the contents were almost entirely vegetable; such as wheat, small vetches, &c. "But this (says our author) was the only instance of the

kind I had ever seen, as these birds in general feed the young cuckoo with scarcely any thing but animal food. However, it served to clear up a point which before had somewhat puzzled me; for having found the cuckoo's egg in the nest of a green-linnet, which begins very early to feed its young with vegetable food, I was apprehensive, till I saw this fact, that this bird would have been an unfit foster parent for the young cuckoo.

"The titlark, I observe, feeds it principally with grasshoppers. But the most singular substance, so often met with in the stomachs of young cuckoos, is a ball of hair curiously wound up. I have found it of various sizes, from that of a pea to that of a small nutmeg. It seems to be composed chiefly of horse-hairs; and from the resemblance it bears to the inside covering of the nest, I conceive the bird swallows it while a nestling. In the stomachs of old cuckoos are often seen masses of hair; but these had evidently once formed a part of the hairy caterpillar, which the cuckoo often takes for its food."

There seems to be no precise time fixed for the departure of young cuckoos. Mr. Jenner believes they go off in succession, probably as soon as they are capable of taking care of themselves; for, although they stay here till they become nearly equal in size and growth of plumage to the old cuckoo, yet in this very state the fostering care of the hedge-sparrow is not withdrawn from them. "I have frequently (says he) seen the young cuckoo of such a size, that the hedge-sparrow has perched on its back, or half-expanded wing, in order to gain sufficient elevation to put the food into its mouth. At this advanced stage, I believe that young cuckoos procure some food for themselves; like the young rook, for instance, which in part feeds itself, and is partly fed by the old ones, till the approach of the pairing season. If they did not go off in succession, it is probable we should see them

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in large numbers by the middle of August; for, as they are to be found in great plenty when in a nestling state, they must now appear very numerous, since all of them must have quitted the nest before this time. But this is not the case; for they are not more numerous at any season than the parent-birds are in the months of May and June.

From what has been said, it becomes evident, that the same instinctive impulse, which directs the cuckoo to deposite her eggs in the nests of other birds, directs her young one to throw out the eggs and young of the owner of the nest. The scheme of nature would be incomplete without it; for it would be extremely difficult, if not impossible, for the little birds destined to find succour for the cuckoo, to find it also for their own young ones after a certain period; nor would there be room for them to inhabit the nest.

It is supposed, that there are more male cuckoos than females; since two are often seen in dispute where a third has been in fight; which, no doubt, was of the opposite sex. Mr. Pennant observed, that five male birds were caught in a trap in one season; and Mr. Latham says, that, "out of at least half a dozen that I have attended to, my chance has never directed me to a female; and it is to be wished, that future observers may determine whether our observations have rise only in chance, or are founded on the general circumstance." He believes that the male birds are more liable to be shot, their note directing the gunner where to take aim, while the female is secured by her silence.

Cuckoos may be, and often are, brought up tame, so as to become familiar. They will eat in this state bread and milk, fruits, insects, eggs, and flesh either cooked or raw; but, in a state of nature, they chiefly live on caterpillars. When fat, they are said to be as good eating as a land-rail. The French and Italians eat them to this day. The ancient Romans admired them

them greatly as food: Pliny says there is no bird which can be compared to them for delicacy.

Most ornithologists agree, that insects are the chief part of the cuckoo's food, and that it is peculiarly fond of birds' eggs. Frisch says, that those who bring up young cuckoos, ought in every season to feed them in the morning and evening at the same time as in the longest days of summer. That author has also observed the way in which they eat the insects alive: they lay hold of the caterpillar by the head, and, drawing it into their bill, they squeeze the juicy matter through the anus, and then shake it several times before they swallow it. They also seize butterflies by the head, and, pressing with their bill, they crush the breast, and swallow the whole together with the wings. They likewise eat worms; but they prefer such as are alive. When insects could not be had, Frisch gave a young cuckoo which he raised, sheep's liver, and especially kidneys, cutting them into small strips like the insects for which they were substituted. When these were too dry, he soaked them a little, that they might be easily swallowed. The bird never drank unless its food was too dry, and then it drank awkwardly and with reluctance. In every other case it rejected water, and shook off the drops which were forcibly or artfully introduced into its bill: in short, it is habitually under the impression of a hydrophobia; and perhaps this may be the reason why a decoction of the cuckoo's dung in wine has been recommended as a sure remedy for the hydrophobia.

The young cuckoos never sing during their first year, and the old ones cease towards the end of June, at least their song is then unfrequent. But this silence does not announce their departure. It is the scarcity of insects, no doubt, which determines them to retire to warmer climates; they migrate for the most part into Africa, since they are seen twice a-year passing and repassing the island of Malta. On their arrival in our climates

climates they approach nearest our dwellings; during the rest of their stay they fly about among the woods, the meadows, &c. and wherever they can discover nests to plunder or deposit their egg, or find insects and fruits. Towards autumn, says Buffon, the adults, and especially the females, are excellent food, and as fat as they were lean in the spring; for it is in this season only that the proverb, *lean as a cuckoo*, is just. Their fat is collected chiefly under the neck, and is the most delicate morsel of the bird. They are commonly single, restless, and perpetually changing their place; and, though they never fly to any great distance, they range over a considerable tract during the course of the day. The ancients watched the times of the appearance and disappearance of the cuckoo in Italy. The vine-dressers who had not lopped their vines before its arrival were reckoned lazy, and held the object of public derision. The by-passers who saw the backward state of the vineyard, mocked the owner's indolence by repeating the call of that bird, which was itself, and with much propriety, regarded as the emblem of sloth, since it dispenses with the sacred obligations of nature. It was an usual expression also, *crafty as a cuckoo* (for cunning and indolence may subsist together); because, declining the task itself, it contrives to make other birds hatch its eggs.

Though subtle, though solitary, the cuckoos are susceptible of a sort of education. Many persons have reared and tamed them. A cuckoo thus bred, Buffon informs us, knew its master, answered his call, followed him to the sport, perched on his fowling-piece, and, if it found a cherry-tree on the road, it flew to it, and returned not till satiated with the fruit; sometimes it did not join its master again the whole day, but followed him at a distance, shifting from tree to tree: when at home it was permitted to run about, and to roost at night. It requires to be carefully guarded against the cold during the transition of autumn
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into winter ; for this is a critical period with the cuckoo. Olina says that the cuckoo may be trained for the chase like the sparrow-hawks and the falcons ; but he is the only person who makes that assertion, which, perhaps, as well as many other errors in the history of this bird, has its source in the resemblance of its plumage to that of the sparrow-hawk.

The plumage of the cuckoo is very subject to vary in different individuals ; and consequently, in describing them, we can do nothing more than give an idea of the colours as they are most commonly observed. In young cuckoos, the bill, the legs, the tail, and the under side of the body, are nearly the same as in the adults, except that the quills are more or less retained in their tubes : the throat, the fore part of the neck, and the under side of the body, are barred with white and black ; in such a manner, however, that the black predominates on the anterior parts more than on the posterior (in some subjects there is hardly any white under the throat) ; the upper side of the head and body is beautifully variegated with blackish, white, and rusty spots, distributed so that the rusty appears more on the middle of the body, and the white on the extremities ; there is a white spot behind the head, and sometimes above the face ; all the quills of the wings are brown tipped with white and spotted more or less with rusty and white ; the iris is greenish grey, and the ground of the plumage is a very light ash-colour.

In the full grown male the intestinal tube is about twenty inches ; there are two *cæca* of unequal length, the one fourteen lines (sometimes twenty-four), the other ten (sometimes eighteen), both directed forwards, and adhering all along to the great intestine, by means of a thin transparent membrane ; there is a gall-bladder ; the kidneys are placed on each side of the spine, divided into three principal lobes, and these subdivided into others smaller, secreting a whitish liquor ; the two testicles are of an oval shape, and of unequal

unequal size, attached to the upper part of the kidneys, and separated by a membrane.

The œsophagus dilates, at its lower part, into a sort of glandular sac, parted from the stomach by a contraction; the stomach is slightly muscular on its circumference, membranous on its middle, and adhering by means of fibrous net-work to the muscles of the lower belly, and to the different parts which surround it. It is besides much smaller and better proportioned in a young bird reared by a red-breast or pettychaps than in one bred and tamed by man; in the latter, the stomach, being distended by excessive feeding, is as large as a common hen's egg, and occupies all the anterior part of the cavity of the belly, from the sternum to the anus, and sometimes stretches under the sternum five or six lines, and, at other times, it conceals the whole of the intestines; whereas in the wild cuckoo, it never extends quite to the sternum, but leaves uncovered, between its lower part and the anus, two circumvolutions of the intestines, and three on the right side of the abdomen. It should be added, that, in most of the birds dissected, nothing was required to be compressed or displaced in order to perceive one or two circumvolutions of intestines in the cavity of the belly on the right side of the stomach, and one between the lower part of the stomach and the anus. This difference of conformation, therefore, consists but in degree, since, in the greater number of the winged tribes, not only is the posterior surface of the stomach separated from the spine by a portion of the intestinal tube which is interposed, but the left side is never covered by any portion of these intestines; and this single difference is far from proving that the cuckoo is incapable of hatching, as some ornithologists allege. It is not, probably, because the stomach is too hard, since, the sides being membranous, its tenseness proceeds from accident or repletion; nor is the reason because the bird avoids cooling its stomach, which is less

shielded than that of other birds; for it is evident, that it would be much less liable to be affected by cold, if employed hatching than in fluttering and perching on trees. The nut-hatch has the same structure, and yet it fits. Besides, not only the stomach, but the whole of the lower part of the body, rests upon the eggs, otherwise most birds which, like the cuckoo, have a long sternum, could not cover above three or four at once, which falls much short of the usual number.

Total length thirteen or fourteen inches; the bill thirteen lines and a half; the edges of the upper mandible scalloped near the point (but not in all the young ones); the nostrils elliptical, encircled by a projecting margin, and in the centre there is a small whitish speck which rises almost as high as the margin; the tongue is white at the point, and not forked; the tarsus ten lines; the thigh less than twelve; the inner one of the hind nails is the weakest and the least hooked; the two fore toes are connected together at their base by a membrane; the under side is of a very fine texture, like shagreen; the alar extent about two feet; the tail is seven inches and a half, consisting of ten tapered quills, and exceeding the wings by two inches.

Specific character of the *cuculus canorus*, or common cuckoo: "Its tail is rounded, blackish, and dotted with white." In England it arrives about the middle of April, and retires in the end of July; its appearance is a month later in the cold climate of Sweden. Its retreat is absolutely unknown. Synonymes. ---Le coucou, Buff. *Cuculus canorus*, Linn. Gmel. and Muller. *Cuculus*, Gesner, Will. Johnst. Briss. &c.

THE TOURACO, OR CRESTED CUCKOO OF AFRICA.

THE principal characters of the European cuckoo are, as we have seen, a large head, a broad wide bill, the toes placed two before and two behind, the legs feathered



Tab. sculp.

The Touraco, or Crested Cuckoo of Africa

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feathered and short, the thighs still shorter, the nails slender and slightly hooked, the tail long and consisting of ten tapered quills. But the whole must be received with a degree of latitude, nor must we expect to find all the characters exactly combined in each bird that ought to be classed with the cuckoo of Europe. The various tribes of animals melt into each other, and no absolute limits can be assigned. It is enough if the birds which we refer to the genus of the cuckoos be more closely related to it than to any other genus. Our object is to trace nature as she actually exists, not to form artificial arrangements; and to facilitate the progress of knowledge, by condensing and abridging the detail of facts, which serves as the foundation. Even what is regarded as the most fixed and certain character, viz. the disposition of the toes, two placed before and two behind, is also liable to vary; since we have observed, in the cuckoo, that one of the hind toes sometimes turns forwards; and others have found, in the owls, that one of the anterior toes sometimes turns backwards; but these slight differences, far from confounding the genus of the cuckoos, display the true order of nature; as they shew the richness of her plans, and the ease with which they are executed; exhibiting the endless variety of shades, the infinite diversity of features which distinguish the individual, and yet without obliterating the general family likeness.

It is a remarkable circumstance with regard to the tribe of cuckoos, that the branch settled in the new world seems the least subject to variation, and retains the greatest resemblance to the European species considered as the common trunk, and from which it was perhaps later separated. In fact, the European cuckoo visits the northern countries, and pushes its excursions as far as Denmark and Norway, and consequently might cross the narrow straits which divide the continents at these high latitudes: but it could much more easily pass the isthmus of Suez, or some narrow inlets, to

spread through Africa ; and nothing could oppose or retard its progress into Asia. In these countries, therefore, the settlement must have been more early, and a greater deviation from the primitive stock may be expected. Accordingly, though there are scarcely two or three exceptions or exterior anomalies in fifteen species or varieties found in America, there are fifteen or twenty in thirty-four species that occur in Asia and in Africa ; and no doubt there are more, if all the cuckoos were known, which is so far from being the case, that it is still undecided whether, among so many, there be more than one that drops its eggs in the nests of other birds ; we know that many of the foreign kinds build their nest, and hatch their own eggs. But, though we are commonly acquainted with the superficial differences only, some general and radical ones must obtain, especially between two branches settled in the old and in the new world, which must undoubtedly receive an impression from the climate. The American species are in general smaller than those of the old continent, probably owing to the same causes which check the growth and expansion of quadrupeds in the new world, whether those be indigenous, or introduced. There are at most two species of cuckoos in America of nearly the same size with ours ; but the others exceed not our blackbirds and thrushes. In Africa and Asia, the species are as large as the European, or larger, and some of them equal to a pullet in bulk.

The touraco is one of the most beautiful of the African birds ; for, besides that its plumage is brilliant and its eyes sparkle with fire, it has a crest on the head, or rather a crown, which confers an air of distinction. It is as large as the jay ; but its long broad tail seems to increase its bulk : its wings are however very short, scarcely reaching to the origin of the tail. The upper mandible is convex, and covered with feathers reflected from the forehead, and in which the nostrils are concealed. Its eye, which is lively and full of fire, is encircled

circled by a scarlet eye-lid, which has a great number of protuberant *papillæ* of the same colour. The beautiful tuft, or rather *mitre*, that crowns its head, is a bunch of bristled feathers, which are fine and silky, and consist of such delicate fibres, that the whole is transparent. The beautiful green which covers all the neck, the breast, and the shoulders, is also composed of fibres of the same kind, and equally fine and silky.

There are two species, or rather two varieties, of the genus; the one termed the *Abyssinian touraco*, the second the *touraco from the Cape of Good Hope*. The only difference lies in the tints, for the bulk of the colours is the same. The Abyssinian bird has a blackish tuft, compact like a lock, and reflected backwards: the feathers on the forehead, the throat, and compass of the neck, are meadow green; the breast, and top of the back, are of the same colour, but with an olive tinge, which melts into a purple brown, heightened by a fine green gloss; all the back, the coverts of the wings, and their quills next the body, and all those of the tail, are coloured in the same way; all the primaries are of a fine crimson, with a black indenting on the small webs, near the tip; the under side is dun grey, slightly shaded with light grey.

The touraco of the Cape of Good Hope differs not from the Abyssinian one, except that the tuft is of a lighter green, and sometimes fringed with white. The neck is of the same green, which melts on the shoulders into a darkish tint, with glossy green reflections.

The Comte de Buffon had one of these birds alive from the Cape, and was assured that it lived upon rice. No other food was offered to it at first, and this it would not touch, but grew famished, and, in that extremity, it ate its own excrements. During three days, it subsisted only on water and a bit of sugar. But, observing grapes brought to the table, it shewed a strong appetite for them; some were given to it, which it swallowed greedily. It discovered in the same way

a fondness for apples, and afterwards for oranges. From that time it was fed on fruit for several months. This seemed to be the natural food, its curved bill not being in the least adapted for collecting grain. The bill is wide, and cleft as far as under the eyes; the bird hops, but does not walk; its nails are sharp and strong, its hold firm; its toes are stout, and invested with thick scales. It is lively, and utters a weak, low, and hoarse, cry, from the bottom of its gizzard, without opening its bill. It vents this cry of its own accord, when it is hungry; but it may be made to repeat it at pleasure, if prompted to it by imitation. It does not appear that this bird is found in America, though Albin gives it as brought from Mexico. Edwards affirms that it is indigenous in Guinea, from whence the individual mentioned by Albin was probably transported into the new world.

Specific character of the *cuculus Persa*: "Its tail is equal; its head crested; its body bluish green, its wing quills blood-coloured. Synonymes.---*Cuculus Persa*, Linn. and Gmel. *Cuculus Guineensis cristatus viridis*, Briss. Crown-bird from Mexico, Alb.

THE GREAT SPOTTED CUCKOO.

THIS cuckoo is not entirely foreign to Europe, since one was killed on the rock of Gibraltar. It would seem to be migratory, wintering in Asia or in Africa, and appearing sometimes in the south of Europe. Both this and the following species may be considered as intermediate between the common and the foreign kinds: it differs, however, from the common not only by its size and plumage, but by its proportions.

The most remarkable ornament of this cuckoo is a silky tuft of a bluish grey, which can be erected at pleasure, but in the ordinary state lies flat on the head; there is a black bar on the eyes, which gives it a marked aspect; brown predominates on all the upper parts, including the wings and the tail, but the middle quills,

quills, and almost all the coverts of the wings, the four lateral pairs of the tail, and their superior coverts, are terminated with white, which forms a pleasant enamel; all the under surface of the body is brown orange, which is pretty bright on the anterior parts, and duller on the posterior; the bill and legs are black.

It is as large as a magpie; the bill fifteen or sixteen lines; the legs short; the wings not so long as in the ordinary cuckoo; the tail about eight inches, consisting of ten tapered quills, and exceeding the wings about four inches and a half.

Specific character of the *cuculus glandarius*: "Its tail is wedge-shaped, its head somewhat crested, with a black bar on its eyes." Synonymes.---*Cuculus glandarius*, Linn. Gmel. and Bor. *Cuculus andalusæ*, Briff.

BLACK AND WHITE CRESTED CUCKOO.

THIS cuckoo likewise has been seen in Europe. The authors of the Italian ornithology inform us that in 1739 a male and female of this species nested in the vicinity of Pisa, and that the hen laid four eggs, which she hatched, &c. It must, therefore, be very different from the ordinary cuckoo, which undoubtedly never recurs to incubation in our climates.

The head is black, and ornamented with a tuft of the same colour, which lies backwards; all the upper side of the body, including the superior coverts, is black and white; the great quills of the wings rufous, terminated with white; the quills of the tail are blackish, terminated with light rufous; the throat and breast are rufous; the inferior coverts of the tail are rusty; the rest of the under side of the body white, and even the feathers on the lower part of the thigh; the bill is greenish-brown, and the legs green.

This cuckoo is larger than the ordinary kind, and its tail is proportionably longer; its wings are also longer, and its tail more tapered, than in the great spotted cuckoo, which it resembles in other respects. Specific character

character of the *cuculus pisanus*: "Its tail is wedge-shaped; its body variegated with black and white above, and white below; its head crested with black; its throat and breast, rufous." Synonymes.---*Cuculus Pisanus*, *Gmel.* *Cuculus ex nigro et albo mixtus*, *Gerini.* Pisan cuckoo, *Lath.*

THE GREEN CUCKOO OF MADAGASCAR.

THIS bird is chiefly distinguished by its magnitude: all the upper side of the body is deep olive, variegated with waves of a darker brown; some of the lateral quills of the tail are terminated with white; the throat is light olive, shaded with yellow; the breast, and the top of the belly, fulvous; the lower belly brown, and also the inferior coverts of the tail; the thighs are of a grey colour; the iris orange; the bill black; and the legs yellowish brown. Total length twenty-one inches and a half; the bill twenty-one or twenty-two lines; the tail ten inches, and composed of ten tapered quills, and extending more than eight inches beyond the wings, which are not long.

Specific character of the *cuculus Madagascariensis*: "It is olive, waved with brown; below fulvous; the throat olive, diluted with yellow." Synonymes.---*Cuculus Madagascariensis*, *Gmel.* Great Madagascar cuckoo, *Lath.*

THE CRESTED CUCKOO OF MADAGASCAR

IT has a tuft which reclines back, whose feathers, and also those of the rest of the head and of all the upper side of the body, are greenish cinereous; the throat and fore part of the neck are cinereous; the breast red-wine colour; the rest of the under side of the body whitish; the legs barred almost imperceptibly with cinereous; what appears of the quills of the tail and of the wings is light green, changing into blue and shining violet, but the lateral quills of the tail are terminated with white; the iris is orange; the bill and legs

legs black ; it is rather larger than the ordinary cuckoo, and is differently proportioned.

Total length fourteen inches ; the bill thirteen lines ; the alar extent is seventeen inches ; the tail is seven inches, consisting of quills that are a little tapered, and exceeds the wings six inches. Commerſon made this deſcription in the month of November, from the living ſubject, and in its native climate ; he adds, that its tail diverges, or rather expands, that its throat is ſhort, its noſtrils oblique and uncovered, that its tongue terminates in a cartilaginous tip ; its cheeks naked, wrinkled, and bluifh. The fleſh is excellent. The bird is found in the woods near Fort Dauphin.

Specific character of the *cuculus criſtatus* : " Its tail is rounded ; its head creſted ; its body of a gloſſy greeniſh aſh-colour." Synonymes.---*Cuculus criſtatus*, Linn. and Gmel. *Cuculus Madagaſcarienſis*, criſtatus, Briff. and Ger. The Madagaſcar creſted cuckoo, Lath.

THE EGYPTIAN CUCKOO.

THE male and female of this ſpecies ſeldom ſeparate from each other ; but it is more rare to find ſeveral pairs collected together. They are *acridophagites*, or locuſt-eaters, in the full ſenſe of the word ; for they ſeem to ſubſiſt moſtly, if not entirely, on graſhoppers. They never alight on large trees, and far leſs on the ground ; but perch on buſhes near ſome brook. They have two uncommon characters : the firſt is, that all the feathers which cover the head and neck are thick and hard, while thoſe on the belly are ſoft and looſe ; the ſecond is, that the nail of the inner hind toe is long and ſtraight, like that of the lark.

In the female the head and upper ſide of the neck are dull green, with poliſhed ſteel reflections ; the ſuperior coverts of the wings are greeniſh ruſous ; the quills of the wings ruſous, terminated with ſhining green, except the two laſt, which are entirely of that colour,

colour, and the two or three preceding these, which are mixed with it; the back is brown, with greenish reflections; the rump brown, and also the superior coverts of the tail, whose quills are shining green, with the gloss of burnished steel; the throat and all the under side of the body are rusty white, which is lighter under the belly than on the anterior parts, and on the flanks; the iris is bright red; the bill black, and the legs blackish. Total length from fourteen inches and a half to sixteen and a half; the bill sixteen or seventeen lines; the nostrils three lines, and very narrow; the tarsus twenty-one lines; the inner hind nail nine or ten lines; the wings six or seven inches; the tail eight lines, consisting of ten tapered quills, and exceeding the wings five inches.

The bird described by Sonnerat in his voyage to New Guinea, under the name of the *green Antigua cuckoo*, resembles the preceding so much, that what we have said equally applies to it: the head, the neck, the breast, and the belly, are of a dull green verging on black; the wings are of a deep brown rufous; the nail of the inner toe is more slender, and perhaps rather longer; all its feathers are in general hard and stiff; the webs are ragged, and each fibre is a new shaft, to which shorter fibres are attached. This cuckoo is hardly larger than that of Europe.

The Madagascar bird, called *toulou*, resembles the female of this Egyptian bird in the same properties as the cuckoo of the Philippines; its plumage is not so dark, especially on the anterior part, where the black is softened by spots of light rufous; in some individuals the olive assumes the place of the black on the body, and it is sprinkled with whitish longitudinal spots, which appear also on the wings. We should therefore suppose that they are young ones of the year's hatch, especially as, in the birds of this genus, the plumage undergoes considerable change, it is well known, at the first moulting.

Spe-

Specific character of the *cuculus Ægyptius*: "It is brown, below rufous white; its head and neck dull green; its tail wedge-shaped, and bright green; its wing-quills rufous." Synonymes.---*Cuculus Ægyptius*, *Gmel.* Egyptian cuckoo, *Lath.*

THE SENEGAL CUCKOO.

THE two prevailing colours of its plumage are rufous and white. When it perches, the tail spreads like a fan; it is almost perpetually in motion; its cry is precisely the sound made by two or three jerks of the tongue upon the palate. Like the two preceding, it has a straight long nail on the inner hind claw, similar in form to that of the lark's; the upper surface of the head and neck blackish; the sides of each feather deeper coloured, and yet more brilliant; the wings rufous, and their coverts rather darker near the tip; the back is of a very brown rufous; the rump and the superior coverts of the tail barred transversely with light brown on a deeper brown ground; the throat, the fore part of the neck, and all the under side of the body, are dirty white, only the feathers of the throat and neck have a more brilliant shaft, and the rest of the under side of the body is radiated transversely with delicate stripes of a lighter colour; the tail is blackish; the bill black, and the legs grey brown; the body is scarcely larger than that of a blackbird, but it has a much longer tail.

Total length fifteen or sixteen inches; the alar extent a foot and seven or eight inches; the tail eight inches, consisting of ten tapered quills, and exceeding the wings about four inches. Specific character of the *cuculus Senegalensis*: "Its tail is wedge-shaped; its body grey, white below; its cap and its tail-quills blackish." Synonymes.---*Le rufalbin*, *Buff.* *Cuculus Senegalensis*, *Linn. Gmel. Briss. and Bor.* Straight-heeled cuckoo, *Lath.*

THE INDIAN SPOTTED CUCKOO.

THIS species is smaller, though it has a longer shape, and measures, between the bill and the tail, half an inch more than that of the ordinary cuckoo. Its head is larger, its wings shorter and its tail longer in proportion. The prevailing colour is brown, which is deeper and spotted with a lighter brown on the upper part, more dilute and spotted with white, orange, and black, on the lower part; the light brown or rusty spots form, by their arrangement on the quills of the tail and wings, a transverse barring, which is a little inclined towards the point of the quills; the bill and legs are yellowish. Total length thirteen or fourteen inches; the bill twelve or thirteen lines; the tail about seven inches, composed of ten tapered quills, and exceeding the wings by near five inches.

Specific character of the *cuculus scolopaceus*: "Its tail is wedge-shaped; its body clouded on both sides with grey and brown." Synonymes.---*Cuculus scolopaceus*, Linn. and Gmel. *Cuculus Bengalensis nævius*, Briss. and Klein. Brown and spotted Indian cuckoo, Edw. Indian spotted cuckoo, Latb.

THE VARIEGATED CUCKOO OF MINDANAO.

THIS bird is so much variegated, that, at first sight, we might take its coloured figure as designed for the young cuckoo of Europe. Its throat, head, neck, and all the upper part of the body, are spotted with white or rufous, which is more or less dilute on a brown ground, which is itself variable, and verges on a gold green more or less brilliant on all the upper part of the body, including the wings and tail; but the disposition of these spots is changed on the quills of the wings, where they form transverse bars of pure white externally, and tinged internally with rufous, and on the quills of the tail, where they form transverse bars of a rusty colour; the breast and all the under

der side of the body, as far as the extremity of the lower coverts of the tail, are white, barred transversely with blackish; the bill is also blackish above, but rusty below, and the legs are brown grey.

This cuckoo is found in the Phillippines; and it is much larger than the European kind. Total length fourteen inches and a half; the bill fifteen lines; the longest toe seventeen lines; the shortest seven lines; the alar extent nineteen lines and a half; the tail seven inches, consisting of ten quills, which are nearly equal, and exceeds the wings four inches and a half. Specific character of the *cuculus mindanensis*: "Its tail is rounded; its body green gold, spotted with brown white; below waved with white and blackish." Synonymes. --- *Cuculus mindanensis*, *Gmel.* The Mindanao cuckoo, *Lath.*

THE HONORATUS, OR SACRED CUCKOO.

THIS species was introduced by M. Poivre, and differs from the preceding by its smallness, by the shortness of its bill, and by the unequal length of its tail quills. The head and all the upper side of the body are blackish cinereous, spotted regularly with white; the throat and all the under side of the body white, barred transversely with cinereous; the quills of the wings blackish, those of the tail cinereous; and both are barred with white; the iris light orange; the bill and legs of a dilute ash-colour.

This cuckoo is held sacred on the Malabar coast, because, no doubt, it destroys the pernicious insects. General superstition originates from error; though some particular ceremonies and observances may have their foundation in reason. Total length eleven inches and a half; the tail five and a half, consisting of ten tapered quills, the outer pair being scarcely half the length of the inner, and it exceeds the wings three inches and a half. Specific character of the *cuculus honoratus*: "Its tail is wedge-shaped; its body blackish, spotted

spotted with white; below striped with white and cinereous." Synonymes.---*Cuculus honoratus*, Linn. and *Gmel.* *Cuculus Malabaricus nævius*, Briff. Sacred cuckoo, Lath.

THE CAPE CUCKOO.

THIS cuckoo from the Cape of Good Hope resembles that of Europe, both in its proportions and in the transverse bars below the belly, and in its size, which is not much smaller. The upper side of the body is brown green; the throat, the cheeks, the fore part of the neck, and the superior coverts of the wings, are deep rufous; the quills of the tail are of a lighter rufous, terminated with white; the breast, and all the rest of the under side of the body, are barred transversely with black on a white ground; the iris is yellow; the bill deep brown; and the legs reddish brown. The total length is somewhat less than twelve inches. Synonymes.---*Cuculus Capensis*, *Gmel.* The Cape cuckoo, Lath.

THE BROWN CUCKOO, VARIEGATED WITH BLACK.

ALL we know of this bird beside what is contained in the appellation, is that it has a long tail, and that it is found in the Society Isles, and there called the *arawereroa*. The only account given of it is contained in Captain Cook's second voyage, from which we have extracted this short indication with the view of inducing travellers addicted to natural history to procure fuller information concerning this new species.

Specific character of the *cuculus tahitiensis*: "It is brown, below white, striped with brown; its eyebrows white; its wing-quills spotted with ferruginous." Synonymes.---*Cuculus tahitiensis*, *Gmel.* *Cuculus tahitiensis*, Lath. Ind. Society cuckoo, Lath. Syn.

THE RUFOUS SPOTTED CUCKOO.

THIS is found in the East Indies, and as far as the Phillippines. The head and all the upper part of the body are dotted with rufous on a brown ground, but the quills of the wings and tail, and its superior coverts, are barred tranversely; all the quills of the tail are terminated with light rufous; the throat and all the under side of the body are barred transversely with blackish brown, on a rufous ground; there is an oblong spot of light rufous below the eyes; the eyes are yellowish rufous, the bill horn colour, and the legs brown grey. In the female the upper side of the head and neck is less dotted, and the under side of the body is of a lighter rufous.

This cuckoo is much larger than the ordinary kind, and almost equal to a Roman pigeon. Total length sixteen or seventeen inches; the bill seventeen lines; the alar extent twenty-three inches; the tail eight inches and a half, consisting of ten tapered quills, and exceeding the wings four inches and one third. The subject described by Sonnerat had not the rufous spot under the eyes; and, what is still more different, the quills of the tail were equal, as in the spotted Chinese cuckoo; so that it ought perhaps to be viewed as a variety of the above species.

Specific character of the *cuculus punctatus*: "Its tail is wedge-shaped; its body blackish, dotted with rufous; below rufous, with black streaks; its tail-quills barred with rufous." Le coucou brun piquete de roux, Buff. *Cuculus punctatus*, Linn. and Gmel. *Cuculus Indicus nævus*, Briss.

THE CHINESE SPOTTED CUCKOO.

THIS is one of the small number of cuckoos in which the tail is not tapered; the upper side of the head and neck is of an uniform blackish, except a few whitish spots that occur on the front and above the

480 NATURAL HISTORY

eyes; all the upper side of the body, including the quills of the wings and their coverts, is of a greenish deep grey, variegated with white, and enriched by brown gold reflections; the quills of the tail are barred with the same colours; the throat and breast variegated pretty regularly with brown and white; the rest of the under surface of the body and the thighs are variegated with the same colours, and also the feathers which fall from the lower part of the thigh as far as the origin of the toes; the bill is blackish above, yellow below, and the legs yellowish.

Total length about fourteen inches; the bill seventeen lines; the tail six inches and a half, consisting of ten nearly equal quills, and exceeding the wings by four inches and a half. Specific character of the *cuculus maculatus*: "Its tail is wedge-shaped; its body above greenish grey, with white spots; below variegated with brown and white." Synonyme.---*Cuculus maculatus*, *Gmel.*

THE RADIATED CUCKOO.

THE throat and the sides of the head resemble the colour of the lees of wine; the upper part of the head is blackish grey; the back and the wings are of a dull dark brown; the under side of the quills of the wings next the body is marked with white spots; the tail is black, radiated, and terminated with white; the breast is of a dull orpiment colour; the belly is light yellow; the belly and breast radiated with black; the iris pale orange; the bill black, and the legs reddish.

This cuckoo is found in Panay, one of the Philippines; it is almost as large as the common cuckoo, and its tail is composed of ten equal quills. Specific character of the *cuculus radiatus*: "It is brown black; below yellow, lineated with black; its throat and cheeks wine-colour; its top blackish grey." Synonymes.--*Cuculus radiatus*, *Gmel.* Panayan cuckoo, *Latbam.*

THE

THE CRESTED CUCKOO OF COROMANDEL.

THE crest of this bird consists of several long narrow feathers, lies on the crown of the head, and projects a little backwards. It is probable that the bird erects its crest when excited by passion. With regard to the colours of its plumage, we might say that there is a sort of black hood thrown over a white tunic; the white on the lower part is pure and unmixed, but the black on the upper part is interrupted, on the edge of the wing, by a white spot immediately below the superior coverts, and by spots of the same colour, which terminate the quills of the tail; the bill and legs are black.

This bird is found on the coast of Coromandel; it is eleven inches total length, its tail is composed of ten tapered quills, and exceeding the wings by one half its length. Specific character of the *cuculus melano-leucus*: "It is black, below white; its tail wedge-shaped, tipped with white; a white spot on its wings; its head somewhat crested." Synonymes.---*Cuculus melano-leucus*, *Gmel.* Coromandel crested cuckoo, *Latb.*

THE YELLOW-BELLIED CUCKOO.

THIS species is found in the island of Panay; and we owe the account of it to Sonnerat: the upper side of the head and throat is light grey; the upper side of the neck, back, and wings, umber coloured; the belly, the thighs, and the inferior coverts of the tail, are pale yellow, tinged with rufous; the tail is black, striped with white; the legs are pale yellow, and so is the bill, only blackish at the point.

This bird is as large as a blackbird, not so bulky, but much longer, being eight inches and some lines, and the tail, which is tapered, occupies more than one half of this length. Specific character of the *cuculus flavus*: "It is brick-coloured, below yellowish; its top and throat dilute grey; its tail wedge-shaped, and

black, lineated with white." Synonymes.-- *Cuculus flavus*, *Gmel.* Yellow-bellied cuckoo, *Lath.*

THE BLACK ORIENTAL CUCKOO.

THIS bird is nearly equal in size to the pigeon; its plumage is entirely of a shining black, changing into green and also into violet, but only under the quills of the tail; the under and inner side of the quills of the wings black; the bill and legs brown grey; and the nails blackish.

A variety of this comes from Mindanao, and is hardly larger than our cuckoo; it is intermediate in regard to size between the preceding and the following one; all its plumage is blackish, verging on blue; the bill is blackish at the base and yellowish at the point; the first of the quills of the wings is almost one half shorter than the third, which is one of the longest; the tail is generally spread.

Specific character: "Its tail is rounded; its body glossy greenish black; its bill brown." Synonymes. --- *Cuculus orientalis*, *Linn.* and *Gmel.* *Cuculus Indicus niger*, *Briss.* Eastern black cuckoo, *Lath.*

THE BLACK INDIAN CUCKOO.

THIS in size is scarcely equal to the blackbird; it is entirely black, like the two foregoing, without mixture of any other permanent colour; but, according to the various angles of the incidental rays, the plumage glows with all the fugitive tints of the rainbow. It is thus that Edwards, the original observer, describes it. The inner and under side of the quills of the wing are black; the bill is bright orange, rather shorter and thicker than in the European cuckoo; the tarsus is thick and short, and of a reddish brown, which is also the colour of the toes. The edges of the upper mandible are not fringed, but undulated.

Specific character: "It is wedge-shaped; its body shining black; its bill bright yellow." Synonymes.---

Cuculus

Cuculus niger, Linn. Gmel. and Klein. *Cuculus Bengalensis niger*, Briss. and Gerini. Black Indian cuckoo, Latbam.

THE GOLD-GREEN AND WHITE CUCKOO.

ALL the upper surface from the base of the bill to the end of the tail is gold-green, waving and rich, whose uniformity is interrupted on the head by five white bars, one on the middle of the front, two others above the eyes, like eye-brows, and stretching backwards, and two others, which are narrower and shorter, below the eyes; most of the superior coverts also, and the middle quills of the wings, all the quills of the tail, and its two largest superior coverts, are terminated with white; the two outermost of the quills of the tail, and the outermost of those of the wings, are streaked with white on the outside; the throat is white, and also the whole under surface of the body, except some green stripes on the flanks, and the ruffles which fall from the lower part of the thigh upon the tarsus; the bill is brown green, and the legs grey.

This cuckoo is nearly of the size of a thrush; its total length about seven inches; the bill seven or eight lines; the tarsus the same, clothed with white feathers as far as the middle; the tail three inches and a few lines, and consisting of ten tapered quills, which in their natural position diverge; it exceeds by only fifteen lines the wings, which are very long in proportion. Synonymes.—*Cuculus auratus*, Gmel. Gilded cuckoo, Latb.

THE PARADISE CUCKOO.

THE plumage of this bird is entirely of a dark green, which appears on the head, the body, the wings, and the tail. Yet it has not been neglected by nature, but, on the contrary, it is decorated by unusual feathers. Beside the tuft which distinguishes the head, the tail has a remarkable form; the outermost pair of quills is

near six inches longer than all the rest; and they have no webs except for the space of three inches at their extremity. It was on account of these two shafts that Linnæus gave the bird the appellation of *paradise cuckoo*. The iris is of a fine blue; the bill blackish; and the legs grey: it is found at Siam, and is nearly as large as the jay.

Total length seventeen inches; the bill fourteen lines; the tail ten inches and nine lines, and rather forked, and exceeding the wings about nine inches. Specific character of the *cuculus paradiseus*: "The two outermost quills of its tail are very long, and dilated at the tip; its head crested, and its body green." Synonymes.---*Cuculus paradiseus*, Linn. and Gmel. *Cuculus Siamenfis cristatus viridis*, Briff. *Paradise cuckoo*, Lath.

THE COLLARED COROMANDEL CUCKOO.

THIS bird is also ornamented with a crest, and is remarkable for the length of two quills of its tail; but these are the middle ones, which project beyond the lateral ones, as also obtains in some species of widow-birds. All the upper side is blackish, from the head inclusively to the end of the tail, except a white collar about the neck, and two round spots of a grey colour behind the eyes, one on each side, which in some measure resemble ear-pendants: we must also except the wings, of which the quills and their middle coverts are variegated with rufous and blackish; and so are the shoulders, though their great quills and coverts are entirely blackish; the throat and the thighs are blackish; all the rest of the under side of the body is white; the iris yellowish; the bill deep cinereous; the legs also cinereous, but lighter coloured. This cuckoo is found on the coast of Coromandel, and is nearly of the size of the red-wing.

Total length twelve inches and a quarter; the bill eleven lines; the wings short; the tail six inches and three

three quarters, consisting of ten quills, the two middle ones much longer than the lateral ones, which are tapered; and it exceeds the wings by five inches and a half. Specific character of the *cuculus coromandus*: "Its tail is wedge-shaped; its body black, below white; a bright white collar." Synonymes.---*Cuculus coromandus*, Linn. and Gmel. *Cuculus coromandelanensis cristatus*, Briss. Collared cuckoo, Lath.

THE CHINESE CUCKOO.

THIS cuckoo resembles the preceding species, by the length of the two middle quills of the tail; its plumage is remarkable, though it consists of only two principal colours, blue on the upper side, and snowy white on the under side; but it would seem that nature, happy always in her careless mood, has suffered a few drops that are snowy white to fall from her pallet upon the crown of the head, where it forms a spot through which the blue appeared in a thousand points; and also upon the cheeks a little behind, where two sorts of ear-pendants are represented, as in the preceding species; and upon the quills and coverts of the tail, each of which is marked by a round white speck near the tip: besides, it appears melted into the azure of the rump and of the base of the great quills of the wing, and has considerably diluted the tinge; the whole is set off to advantage by the dark blackish colour of the throat and the sides of the head; and lastly, the beautiful colour of the iris, the bill, and the legs, adds to the richness of the garb.

Total length thirteen inches; the bill eleven lines, and there are some hairs about its upper base; the tarsus ten lines and a half; the tail seven lines and a half, consisting of ten very unequal quills, of which the two middle ones exceed the two adjacent lateral ones by three inches and a quarter; they exceed the outermost by five inches and three lines, and the wings by almost their whole length.

Specific

Specific character of the *cuculus sinensis*: "Its tail is wedge-shaped and long; its body blue, below white; a white spot on the tips of the tail-quills." Synonymes.---*Cuculus sinensis*, Linn. and Gmel. *Cuculus caeruleus*, Briss. Chinese cuckoo, Lath.

THE BLUE CUCKOO.

THIS species is wholly of a fine blue, and the general uniformity is relieved by very dazzling tints of violet and green, reflected by the quills of the wings; and by tints of pure violet, without the least cast of green, which are reflected by the quills of the tail; the black colour of the legs and bill gives shade to the picture. Total length seventeen inches; the alar extent near twenty inches; the tail nine inches, and composed of ten quills, of which the two middle ones are a little longer than the lateral ones; it exceeds the wings six inches.

Specific character of the *cuculus caeruleus*: "Its tail is rounded; its body blue." Synonymes.---*Cuculus caeruleus*, Linn. and Gmel. *Cuculus Madagascariensis caeruleus*, Briss. Blue cuckoo, Lath.

THE HONEY CUCKOO.

IT is in the interior part of Africa, at some distance from the Cape of Good Hope, that this bird is found, which is known by its singular instinct of pointing out the nests of wild bees. According to some travellers, the cry of this bird is *wieki, wieki*; and this word *wieki* signifies honey in the language of the Hottentots. It sometimes happens that the hunter, in following the call of this cuckoo, is devoured by wild beasts; which has given occasion to say that the bird concerts with them to conduct their prey.

In the morning and evening it utters its cry, which is very shrill, and seems to invite the hunters and others, who search for honey in the wilderness; they answer it in a more hollow tone, and continue always advancing;

advancing ; as soon as it perceives them it flies onward, and hovers over the hollow tree where the swarm is lodged ; if the hunters are too tardy in following it, it redoubles its cries, returns back to them, stops and flutters about, to rouse their attention. It omits nothing to induce them to profit by the little treasure which it discovers, but which it probably could not enjoy without the assistance of man ; either because the entrance into the nest is too narrow, or on account of some other circumstances. While the party are employed in plundering the honey, the bird sits in a neighbouring bush, watching eagerly and expecting its share of the booty, which is commonly left for it, though never in sufficient quantity to satiate its appetite, or extinguish or blunt its ardour in this kind of pursuit.

This is not the idle tale of a traveller ; it is the observation of an enlightened man, who assisted at the destruction of several republics of bees, betrayed by this little spy, and who communicates an account of what he saw to the Royal Society of London. We shall add the description of the female, which he made from the only two subjects that he could procure, and which he shot to the great sorrow of the Hottentots ; the existence of a useful creature is every where precious.

The upper side of the head is grey ; the throat, the fore part of the neck, and the breast, are whitish with a green tinge, which grows more dilute as it spreads, and is scarcely perceptible on the breast ; the belly is white ; the thighs the same, marked with an oblong black spot ; the back and rump are rusty grey ; the superior coverts of the wings are brown grey, those next the body marked with a yellow spot, which, on account of its situation, is often concealed under the scapular feathers ; the quills of the wings are brown ; the two middle quills of the tail are longer and narrower than the rest, and of a brown verging on rust colour ; the two following pairs are blackish, their inside dirty white ; those which succeed are white, terminated with brown,

488 NATURAL HISTORY

brown, and marked with a white spot near their base, except the last pair, where this spot almost vanishes; the iris is rusty grey; the eye-lids black; the bill brown at its base, yellow at the end, and the legs are black.

Total length six inches and a half; the bill about six lines, and there are some bristles about the base of the lower mandible; the nostrils are oblong, with a projecting margin, placed near the base of the upper mandible, and separated only by its ridge; the tarsus is short; the nails slender; the tail tapered, and composed of twelve quills; it exceeds the wings by three-fourths of its length.

Specific character of the *cuculus indicator*: "It is ferruginous grey, below white; its eye-lids naked and black; a bright yellow spot on its shoulders; its tail wedge-shaped and ferruginous." Synonymes.---*Cuculus indicator*, *Gmel.* and *Bor.* Honey-guide, *Sparrman.* Honey cuckoo, *Lath.*

THE AFRICAN CUCKOO.

THIS species and the preceding differ from all the rest, in the number of quills in the tail; these amounting to twelve, though commonly they are only ten. The differences peculiar to the present, consist in the shape of its bill, which is longer, straighter, and not so convex above; in the position of the nostrils, which are oblong, and placed obliquely near the middle of the bill; and in a character which belongs also to the birds of prey, viz. that the female is larger than the male, and of a very different plumage. This bird is found in the island of Madagascar, and no doubt on the corresponding part of Africa.

In the male the crown of the head is blackish, with reflections of green and rose copper; there is a streak of black placed obliquely between the bill and the eye; the rest of the head, the throat, and the neck, are cinereous; the breast, and all the rest of the under side of the body, are of a handsome white grey; the upper
side

side of the body, as far as the end of the tail, is of a green colour, changing into rose-copper; the middle quills of the wing are nearly of the same colour; the large ones blackish, verging on green; the bill is deep brown; and the legs reddish.

The female is so different from the male, that the inhabitants of Madagascar have called it by a different name. The head, the throat, and the upper side of the neck, are striped transversely with brown and rufous; the back, the rump, and the superior coverts of the tail, are of an uniform brown; the small superior coverts of the wings are brown, edged with rufous; the great ones dull green, edged and terminated with rufous; the quills of the wing are the same as in the male, only the middle ones are edged with rufous; the fore part of the neck, and all the rest of the under side of the body, are variegated with blackish; the quills of the tail are of a glossy brown, terminated with rufous; the bill and legs are nearly as in the male.

Specific character of the *cuculus afer*: "It is copper-green, below shining grey; its head and neck cinereous; its top copper blackish; its tail equal and gold green, below black." Synonymes.---*Cuculus afer*, *Gmel.* *Cuculus Madagascariensis major*, *Briss.* African cuckoo, *Lath.*

THE PANAYAN SPOTTED CUCKOO.

THIS species is two thirds bigger than our cuckoo. The bill is black; irides yellow; the upper parts of the body a very deep brown, spotted with rufous yellow; these spots are oblong on the head, and round on the neck, back, and wing coverts; but on the quills they are transverse, and yellowish, intermixed with black dots; the throat is black, spotted as the back; breast and belly pale rufous, transversely striped with black; the tail is long, even at the end, of a rufous

yellow, crossed with transverse bars of black; the legs are lead-colour. It inhabits the Isle of Panay.

Specific character: "It is black brown, with spots of rufous yellow; below rufous, with black transverse stripes; its throat black; its tail equal." Synonymes.

---Cuculus panayus, *Linn.* and *Gmel.* Panayan spotted cuckoo, *Latb.*

AMERICAN CUCKOOS.

THE RAIN CUCKOO.

THE name of *old-man* has been given to this bird in America, because, under its throat, there is a sort of white down or beard, the attribute of age: it is also called the *rain-bird*, because it never calls except before rain. It continues the whole year in Jamaica, and haunts not only the woods, but the straggling bushes: it suffers the hunters to approach very near before it takes flight. Its ordinary food consists of seeds and worms.

The upper side of the head is covered with downy or silky feathers of a deep brown; the rest of the upper side of the body, including the wings and the two middle quills of the tail, is olive cinereous; the throat is white, and the fore part of the neck the same; the breast, and the rest of the under surface of the body, rufous; all the lateral quills of the tail are black tipped with white, and the outermost is edged with white; the upper mandible is black; the lower one is almost white; the legs bluish black: it is somewhat larger than the blackbird.

The stomach of the one dissected by Sloane was very large in proportion to the size of the bird, in which respect it resembles the European species; it was lined by an exceeding thick membrane; the intestines were twisted like a ship's cable, and covered with a quantity of yellow fat. Total length six inches

and three quarters; the alar extent equal to the total length; the tail from seven and a half to eight inches, composed of ten tapering quills, and projecting almost entirely beyond the wings.

Specific character of the *cuculus pluvialis*: "It is cinereous olive, below rufous; its throat white." Synonymes.---*Cuculus pluvialis*, *Gmel.* *Cuculus Jamaicensis*, *Briss.* *Picus major leucophæus*, *Ray.* *Cuculus Jamaicensis major*, *Sloane*, *Brown*, and *Klein.* Rain cuckoo, *Lath.*

THE CAROLINA CUCKOO.

THE same colours as in the preceding appear on the upper surface and on the tail, and almost the same on the bill; but the white of the under surface of the body, which in the rain-bird was confined to the throat and breast, extends in this species over all the lower part: the wings have a rusty cast, and are longer in proportion; the tail is shorter and of a different shape.

This cuckoo is solitary; it resides in the darkest forests, and on the approach of winter it leaves Carolina to find a milder air. Total length thirteen inches; the bill fourteen lines and a half; the tail six inches, consisting of ten quills, of which the three middle ones are longer than the rest, but equal to each other, and the two lateral pairs are shorter, and the more so in proportion to their distance from the centre; the longest project four inches beyond the wings.

Specific character: "It is wedge shaped; its body cinereous above, and white below; its lower mandible yellow." Synonymes.---*Cuculus Americanus*, *Linn.* and *Gmel.* *Cuculus Carolinensis*, *Briss.* and *Klein.* Carolina cuckoo, *Catesby*, *Penn.* and *Lath.*

THE MANGROVE CUCKOO.

THIS bird, the female especially, resembles the Jamaica rain-bird so much, both in its colours and in its general conformation, that the description of the

one may serve for the other; the only difference consists in the size, this bird being much smaller, its tail is also rather longer in proportion. It feeds on insects, and particularly on the larger caterpillars that gnaw the leaves of the mangroves; and hence it is fond of lodging among these trees, where it renders an useful service. These large caterpillars are four inches and a half long, and seven or eight lines broad. In the years 1775 and 1776, they multiplied so excessively, that they devoured almost entirely most of the mangroves and many other plants. It was then that the islanders regretted their not having multiplied this species of cuckoo.

Total length one foot; the bill thirteen lines; the tarsus twelve; the tail five inches and a half, consisting of ten tapering feathers, and exceeds the wings three inches and one third. Specific character: "It is cinereous olive, below tawny, its chin white." Synonyms. -- *Cuculus minor*, *Gmel.* *Cuculus feniculus*, *Lath. Ind.* Mangrove cuckoo, *Lath. Syn.*

THE LONG-BELLIED CUCKOO.

SLOANE asserts that, except the bill, which in this bird is longer, more slender, and whiter, it resembles the rain-bird precisely; he ascribes to it the same habits, and applies the same names. But Brisson, resting probably on the remarkable difference in the length and conformation of the bill, has made this bird a distinct species. This separation is the more proper, as it appears from closer inspection that the plumage is not the same, and that even the white beard is wanting, which gave the trivial name to the preceding species.

Though this bird lives generally in cultivated grounds, it also frequents the woods, because it there finds its proper food, which consists of caterpillars, beetles, worms and vermin, *ravets*, (a sort of cock-chaffers, very offensive and pernicious, frequent in the

the West Indies,) wood-lice, and other insects, which unfortunately are too common in the Antilles, both in the cleared lands and in the forests. It also preys upon small lizards, called *anolis* (written also *anoulys*; they have a fine, sleek skin, and are sometimes eaten by the people of the French West-India islands;) small snakes, frogs, young rats, and sometimes even upon small birds. It surprises the lizards when they are eagerly watching on the branches for flies. With regard to snakes, it seizes them by the head, and, in proportion as the part swallowed digests, it sucks up the rest of the body, which hangs out from the bill. It is thus useful, since it destroys the pernicious animals: it would prove of still greater utility, could it be domesticated; and this might be possible, for it is not shy, but even suffers the young negroes to catch it in the hand, though it has a strong bill, and could make a stout defence.

Its flight is never lofty; it begins flapping with its wings, and, then spreading its tail, it rather skims than flies. It flutters from bush to bush, and hops from bough to bough; it even springs upon the trunks of trees, to which it clings like the wood-peckers; and sometimes it alights on the ground, and hops about like the magpye, always in pursuit of insects or reptiles. It is said to exhale continually a rank smell, and that its flesh is unpalatable; which is very probable, considering the substances upon which it feeds.

These birds retire in the breeding season into the depth of the forests, and remain so well concealed, that no person has ever seen their nest. One might almost be induced to suppose that they have none, and that, like the European cuckoo, they lay their eggs in other birds' nests; but, if this were the case, they would differ from all the other American cuckoos, which themselves build and hatch.

This bird has no brilliant colours in its plumage, but it has always a neat and becoming air: the upper side of its head and body, including the coverts of the wings,

wings, is grey, which is pretty deep, with greenish reflections on the great coverts only; the fore side of the neck and breast is ash grey, and over all these shades there is spread a faint reddish tint; the throat is light fulvous; the rest of the under side of the body, including the thighs, and the inferior coverts of the wings, are more or less of a lively fulvous; the ten first quills of the wing are of a bright rufous, terminated with greenish brown, which, in the following quills, approaches constantly to a rust colour; the two middle quills of the tail are of the colour of the back, with greenish reflections; the eight others are the same about their middle, dark brown, with blue reflections, near their base, and terminated with white; the iris is brown yellow; the eyebrows red; the bill blackish above, and of a lighter colour below; the legs are bluish. This cuckoo is not so large as the European one; it is found in Jamaica, in St. Domingo, &c.

Total length fifteen inches and a half (seventeen and one-third, according to Sloane); the tongue is cartilaginous, terminated by filaments; the tarsus about fifteen lines; the alar extent equal to the total length of the bird; the tail eight inches, and consisting of ten tapering quills; the intermediate ones overlap the lateral ones; it projects about five inches and a half beyond the wings. Specific character of the *cuculus vetula*: "Its tail is wedge-shaped; its body dusky, below brick coloured; the eye-lids red." Synonymes. --- *Cuculus vetula*, Linn. Gmel. and Bor. *Cuculus Jamaicensis*, Briss. Klein, and Ger. *Picus, seu pluviae avis canescens*, Ray and Sloane. Long-bellied rain cuckoo, Lath.

THE BRAZILIAN CRESTED CUCKOO.

THIS cuckoo is very noisy; it lives in the forests of Brazil, and makes them echo to its cry, which is louder than pleasant. It has a kind of tuft, whose feathers are brown, edged with yellowish; those of the

the neck and wings are, on the contrary, yellowish, edged with brown; the upper and under sides of the body are of a pale yellow; the quills of the wings are brown; those of the tail brown also, but terminated with white; the iris is brown; the bill dun-yellow; the legs sea-green. It is as large as the European magpye. Total length fourteen or fifteen inches; the bill about an inch, a little crooked at the end; the tarsus one inch and a half, and clothed with feathers: the tail consisting of eight quills according to Marcgrave. Synonymes.---*Cuculus-Guira*, *Gmel.* *Cuculus Brasiliensis cristatus*, *Briss.* *Guira Acangatara*, *Ray* and *Will.* Brazilian crested cuckoo, *Lath.*

THE LAUGHING CUCKOO.

THIS is called the *laughing-bird*, on account of its call; and is reckoned unlucky by the Mexicans, where it principally abounds. With regard to the Mexican name *quapachtototl*, given it by Willoughby and Ray, it alludes to the fulvous colour which is spread over all the upper surface of its body, and even on the quills of the wings; those of the tail are also fulvous, but of a darker cast; the throat is cinereous, and also the fore part of the neck and breast; the rest of the under side of the body is black; the iris is white, and the bill bluish black. The size of this cuckoo is nearly equal to that of the European kind; it is sixteen inches in total length, and the tail alone occupies the one half of this.

Specific character of the *cuculus ridibundus*: "It is fulvous; its throat and breast cinereous; its belly, its thighs, and the lower coverts of its tail, black." Synonymes.---*Cuculus ridibundus*, *Gmel.* *Avis ridibunda quapachtototl*, *Will.* and *Ray.* *Cuculus Mexicanus*, *Briss.* Laughing cuckoo, *Lath.*

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THE HORNED CUCKOO.

THE singular property of this Brazilian cuckoo is, that there are long feathers on the head, which it can erect at pleasure, and form a double tuft; and hence the epithet of *horned*, which has been bestowed by Brisson. The head is large, and the neck short, as usual in this genus; all the upper surface of the head and body is sooty; the wings are the same, and even the tail, though this has a darker cast, and the feathers at its extremity are marked with a rusty white spot, shaded with black, which melts into a pure white; the throat is cinereous, and so is all the under side of the body; the iris is blood-coloured; the bill yellowish green, and the legs cinereous.

This bird is also distinguished by the length of its tail; for though not larger than a field-fare or large thrush, and its body only three inches long, its tail is nine; it consists of ten tapering quills, the intermediate ones overlapping the lateral ones; the bill is a little hooked at the end.

Specific character of the *cuculus cornutus*: "Its tail is wedge-shaped; its crest cleft; its body sooty." Synonymes.—*Cuculus cornutus*, Linn. and Gmel. *Cuculus Brasiliensis cornutus*, Briss. *Atinga guacumucu*, Ray and Will.

THE VARIEGATED BROWN CUCKOO.

THE upper side of the body is variegated with brown and with different shades of rufous; the throat is light rufous variegated with brown; the rest of the under side of the body is rusty white, which assumes a distinct light rufous on the inferior coverts of the tail; its quills and those of the wings are brown, edged with light rufous, having a greenish cast, particularly on the lateral quills of the tail; the bill is black above, rufous on the sides, rusty below, and the legs cinereous. It is observed as a singular property, that some
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of the superior coverts of the tail extend almost to two-thirds of its length. With regard to size, this cuckoo is compared to the red-wing. Total length ten inches and two-thirds; the tail about six inches, consisting of ten tapering quills, and exceeding the wings by four inches.

The cuckoo known at Cayenne by the name of the *barrier-bird* is nearly as large as the preceding, and very similar in regard to plumage: in general, it has rather less rufous, grey occupying its place, and the lateral quills of the tail are tipped with white; the throat is light grey, and the under side of the body white; the tail too is longer. But, notwithstanding these trifling differences, we must consider it as a variety of the preceding, perhaps only sexual. The name *barrier-bird* alludes to its habit of perching upon the palisades round plantations; in that situation it continually shakes its tail. These birds, though not very wild, never gather in flocks; yet many live in the same district at once; but they seldom haunt the forests.

Specific character of the *cuculus nævius*: "Its tail is wedge-shaped; its body brown and ferruginous; its throat marked with brown furrows; its tail-quills tipped with tawny." Synonymes.---*Cuculus nævius*, Linn. and Gmel. *Cuculus Cayanensis nævius*, Briss. Spotted cuckoo, Lath.

THE ST. DOMINGO CUCKOO.

THE prevailing colour of its plumage is ash-grey, which is more intense above, as far as the two middle quills of the tail inclusively, more dilute below, and intermixed with more or less rufous on the quills of the wings; three pairs of lateral quills in the tail are blackish, terminated with white, and the outermost pair is edged with the same white colour; the bill and legs are dun grey. This bird is found in Louisiana and St. Domingo, but in different seasons; it is nearly of the size of the red-wing.

Total length from ten to twelve inches; the bill fourteen or fifteen lines, the two mandibles bent downwards; the tarsus one inch; the alar extent five inches and a half; the tail five inches and one third, consisting of ten tapered feathers; it exceeds the wings from two inches and a half to three inches.

Specific character of the *cuculus dominicus*: "Its tail is wedge-shaped; its body grey-brown, below partly white; its three lateral tail-quills tipped with white." Synonymes.---Le cendrillard, Buff. *Cuculus Dominicus*, Linn. Gmel. and Briss.

THE CAYENNE CUCKOO.

THIS species is looked upon as an unlucky bird: for which reason the Indians and negroes are said to have an abhorrence of its flesh. It allows a person to get very near it, and does not fly away till the moment he is about to seize it: its flight is compared to that of the king-fisher; it commonly frequents the banks of rivers, and lodges beneath the low branches of trees, where it probably watches the insects which constitute its food; when perched it wags its tail, and perpetually shifts its place. Persons who have lived at Cayenne, and seen this cuckoo several times in the fields, have never yet heard its call. It is nearly as large as a blackbird; the upper side of its head and body is purple chestnut, including the wings of the tail, which are black near the end, terminated with white, and the quills of the wings, which are terminated with brown; the throat and the fore part of the neck are also purple-chestnut, but of a lighter tinge, which varies in different individuals; the breast and all the under side of the body are cinereous; the bill and legs are brown grey.

Total length fifteen inches and nine lines; the alar extent fifteen inches and one third; the tail ten lines, consisting of ten tapered and very unequal quills; it exceeds the wings about eight inches.

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There are two varieties of this species. The one nearly of the same size, but of different colours; the bill red; the head cinereous; the throat and breast rufous; and the rest of the under side of the body blackish ash-colour. The other variety has nearly the same colours, only the cinereous of the under side of the body is shaded with brown; it also has the same natural habits, the only difference consisting in the size, which is almost equal to that of the red-wing. Total length ten inches and a quarter; the alar extent eleven inches and a half; the tail near six inches, consisting of ten equal quills, and exceeding the wings about four inches.

Specific character of the *cuculus cayanus*: "Its tail is wedge-shaped; its body purplish-chestnut, below cinereous; all its tail-quills tipped with white." Synonyms.---*Cuculus Cayanus*, Linn. and Gmel. *Cuculus Cayanensis*, Briss. Cayenne cuckoo, Lath.

THE BLACK CUCKOO OF CAYENNE.

ALMOST the whole plumage is black, except the bill and iris, which are red, and the upper coverts of the wings, which are edged with white; but the black itself is not uniform, for it is lighter below than above. Total length about eleven inches; the tail composed of ten quills, a little tapered, and exceeding the wings about three inches. It lives solitary and tranquil, generally perched upon the trees which grow on the sides of creeks, and it is by no means so active as most of the cuckoos: in short, it may be regarded as an intermediate shade between these and the barbets. Synonym.---*Cuculus tranquillus*, Gmel.

THE LITTLE BLACK CUCKOO.

THIS cuckoo resembles the preceding, both in the colour of its plumage, and in its habits and economy. It does not frequent the woods, yet it is no less wild; it remains whole days perched upon a detached branch

in a cleared spot, without making any exertion beyond what is necessary to catch the insects on which it feeds; it nestles in hollow trees, and sometimes in the ground, when it finds holes ready formed.

This cuckoo is entirely black, except on the hind part of the body, which is white, and this white, which extends to the legs, is separated from the black of the fore part by a sort of orange cincture. Total length eight inches and a quarter; the tail is not three inches, it is a little tapered, and projects not much beyond the wings.

Specific character of the *cuculus tenebrosus*: "It is black; its belly and thighs ferruginous; its rump and crest white; its tail equal." Synonymes:---*Cuculus tenebrosus*, *Gmel.* White-rumped black cuckoo, *Lath.*

THE BRASILIAN CUCKOO.

THE head is of a pale red, bearing a fine tuft of brighter red, variegated with black. The bill is pale red; the upper side of the body is bright red; the coverts of the wings and the under side of the body are pale red; the quills of the wings and those of the tail are yellow, shaded with a blackish tint. This bird is nearly as large as the magpie, its total length being about ten inches. Synonymes:---*Cuculus Brasiliensis*, *Linna.* and *Gmel.* *Cuculus Brasiliensis cristatus ruber*, *Briss.* Red-cheeked cuckoo, *Lath.*

The following species have been lately discovered, viz. The Panayan spotted cuckoo, *cuculus Panayus*. Eastern black cuckoo, *cuculus Indicus*. Its tail is rounded; its body black; its wings and its tail-quills marked at the tip with three black cross lines. It inhabits India, and goes in flocks: it is said to sing delightfully; its flesh is delicate. Held in great veneration by the Mahometans. Its length sixteen inches. Crested black cuckoo, *cuculus ferratus*; from the Cape of Good Hope. Shining cuckoo, *cuculus lucidus*; from New Zealand. Punctated cuckoo, *cuculus punctulatus*; from

from Cayenne. Red-headed cuckoo, *cuculus pyrocephalus*. It inhabits the woods of Ceylon, and lives on fruits. The natives call it *malkoba*. It is sixteen inches long, and weighs four ounces. Its body is black.

YUNK, THE WRYNECK.

THIS genus contains only two species, the wry-neck and the minute wood-pecker; the former a native of Europe and Asia, the last of America. The distinguishing characters are: Bill somewhat taper and sharpened; faintly bent for a short space. Nostrils concave and naked. Tongue taper, worm-shaped, very long, and pointed at the tip. Tail-quills ten in number, flexible. Feet scansory. Called in Greek *ὄρυξ*; in modern Latin *torquilla*; and almost all its other names in various languages refer to the distortion of its neck; in French *torcol*; in Italian *tortocollo*, *capotorto*, *verticella*; in Spanish *torzicuelle*; in German *wind-balz*, *nater-balz*, *naterz-wang*, *nater-wendel*; in Swedish *gioek-tita*; in Danish, *bende-balz*; in Norwegian *sao-gouk*; in Polish *kretoglow*; in Russian *kru-tiholowa*.

THE WRYNECK.

THIS bird is distinguished at first sight by a habit peculiar to itself; it twists and turns back its neck, its head reverted on its back, and its eyes half-shut; and the motion is slow, tortuous, and exactly similar to the undulating wreaths of a reptile. It seems to be occasioned by a convulsion of surprize and fright; and it is also an effort which the bird makes to disengage itself when held; yet this motion is natural to it, and depends in a great measure on its structure; for the young brood have the same vermicular wreathing, and many a timorous nest-finder has fancied them to be young serpents.

These strange attitudes and contortions antiently prompted superstition to adopt this bird in enchantments,
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and

and to prescribe its flesh as the most powerful incentive to love; inasmuch, that the name *lynx* denoted all sorts of enchantments, violent passions, and whatever we call the charm of beauty; that blind power which irresistibly commands our affections. Such is the sense in which Heliodorus, Lycophron, Pindar, Æschylus, and Sophocles, employ it. The enchantress in Theocritus makes this charm, to recall her lover. It was Venus herself that, from Mount Olympus, brought the lynx to Jason, and taught him its virtue, to win the heart of Medea, (Pindar.) The bird was once a nymph, the daughter of Echo: by her enchantments, Jupiter became enamoured of Aurora; and Juno, in wrath, performed the metamorphosis. See Suidas, and the scholiast of Lycophron, Æschylus, Sophocles, Heliodorus, Pindar, and Erasmus.

The wryneck is found no where numerous: each individual leads a sequestered life, and even migrates solitarily. They arrive singly in the month of May. They never enter into any society but that of the female, and it is only transitory, for the domestic union is dissolved, and they retire in September. The wryneck prefers, for the sake of solitude, a straggling tree in the midst of some broad hedge-row. Towards the end of summer, it is found alone among the fields of corn, particularly oats, and in the small paths that run through patches of buck-wheat. It feeds on the ground, and does not clamber on the trees like the woodpeckers, though it is closely related to these birds, and has the same conformation in its bill and feet. Yet it never intermixes with them, but forms a separate family.

The wryneck is rather larger than the lark, being seven inches long, and ten inches across the wings; all its plumage is a mixture of grey, of black, and of tawny, disposed in waves and bars, contrasted so as to produce the richest enamel with these dusky shades; the under side of the body is of a white grey ground,
tinged

tinged with rusty on the neck, and painted with small black zones, which separate on the breast, and stretch into a lance-shape, and are scattered and diluted on the stomach; the tail consists of ten flexible quills, which the bird spreads when it flies, and which are variegated below with black points on a dusky-grey ground, and intersected by two or three broad waved bars; the same mixture of beautiful undulations of black, of brown, and of grey, among which are perceived zones, lozenges, and zigzag lines, paints all the upper surface on a deeper ground. Some naturalists have compared the plumage of the wryneck to that of the woodcock; but it is more agreeably varied, its tints are clearer and distincter, of a softer feel, and have a finer effect; the cast of the colour is rufous in the male, and more cinereous in the female, which discriminates them; the feet are rusty grey; the nails sharp, the two exterior much longer than the two interior.

This bird holds itself very erect on the branch where it sits, and its body is even bent backwards. It clings in the same way to the trunk of a tree when it sleeps; but it never clammers like the woodpecker, nor seeks its food under the bark; its bill, which is nine lines in length and fashioned as those of the woodpeckers, does not assist it in finding its nourishment, and is nothing but the sheath of a long needle-shaped tongue, three or four fingers in length, which it darts into the ant-hills, and which it again draws back covered with ants that stick to its viscous humidity. The point of the tongue is very sharp and horny; and, to give it extension, two great muscles rise from its root; and, after inclosing the larynx, and stretching to the crown of the head as in the woodpeckers, are inserted in the front. It also wants commonly the *cæcum*; and Willoughby says, that in its stead there is only a sort of inflation of the intestines.

The cry of the wryneck is a shrill drawling whistle, which the ancients properly termed *stridor*, and the Greek

Greek name *wryx* seems to imitate the sound. It is heard eight or ten days before the cuckoo. It lays in holes of trees, without making any nest, and on the dust of rotten wood, which it throws to the bottom of the cavity, by striking the sides with its bill. It has commonly eight or ten eggs, which are white as ivory. The male carries ants to its mate during incubation; and the young brood against the month of June, writhes their neck, and whistle loud when any one approaches them. They soon abandon their lodgment, and acquire no attachment for each other, since they separate and disperse as soon as they can use their wings. They can hardly be raised in a cage, it being very difficult to procure the proper food. Those which had been kept some time touched the paste that was offered them with the tip of their tongue, and after tasting rejected it, and died of hunger. An adult wryneck, which Gesner tried to feed with ants, lived only five days: it constantly refused to eat other insects, and perished seemingly from languor.

About the end of summer, this bird grows very fat, and is then reckoned delicious food; so that in many countries it goes by the name of *ortolan*. It is sometimes caught in springes, and the sportsmen tear out its tongue with the view to prevent its flesh from contracting the taste of ants. The season is from August to the middle of September, when the wrynecks depart, none of them remaining during the winter in our climates. The species is spread through all Europe, from the southern states to Sweden and Lapland: it is common in Greece and Italy, and is found in England and France. We learn from a passage of Philostratus that the wryneck was known to the magi, and found in the region of Babylon. Edwards assures us, that it occurs in Bengal. In short, though its numbers are in each country rare, they are diffused through the whole extent of the ancient continent. Aldrovandus alone speaks of a variety in the species; but his description

cription was made from a drawing; and the differences are so slight, that we have thought it unnecessary to separate it.

Specific character of the wryneck, *yunx torquilla*: "It is variegated with white, grey, and ferruginous." The Swedish name, *gioek tita*, signifies 'the cuckoo's explainer;' and the Welch, *gwas y gog*, means 'the cuckoo's attendant.' In fact, the wryneck generally appears a little before the cuckoo. It weighs an ounce and a quarter. Its egg is white, and semi-transparent. Synonymes.---Torcol, *Buff.* *Yunx torquilla*, *Linn.* and *Gmel.* *Iynx*, seu *torquilla*, *Aldrov.* *Gesner*, *Will.* &c. *Torquilla*, *Briff.*

YUNX MINUTISSIMUS, OR THE MINUTE WOODPECKER.

THIS bird is ranked, by Buffon, Latham, and Brisson, among the woodpeckers; but Dr. Gmelin has clearly shewn it to be a species of *yunx*. It is exceedingly minute, only the size of a wren, in length three inches and a half. The bill is black; the top of the head red; the hind head black, dotted with white; sides of the head brown, and dotted with white also. The upper sides of the body are greyish rufous, the under parts dirty white; the feathers bordered with brown; quills and tail brown, with paler edges; legs brown. It inhabits Cayenne, where it is found clinging to the trunks of trees, or hanging by the branches. Specific character: "Above, it is black cinereous; below, dirty white." Synonymes.--*Yunx minutissimus*, *Gmel.* *Picus Cayanensis minor*, *Briff.* *Picus minutus*, *Lath.* &c.

PICUS, THE WOODPECKER.

THE distinguishing characteristics of this genus are ---Bill many-sided, strait, wedge-shaped at the tip; nostrils hid under reclining bristly feathers; the tongue taper, worm-shaped, very long, bony, missile.

file, pointed, beset at the tip with reflected bristles; tail-quills ten, stiff and pointed; feet scansory. In Greek the woodpecker was called δειδοκολαπίης, δρυκολαπίης, from δειδρον, a tree, δρυς, an oak, and κολαπίς, to hollow out by blows; also ξυλοκοπος, from ξυλον, wood, and κοπιω, to cut, and in Hesychius σπιλεκίος. Aristophanes calls it, πελεκαν, from πελεκυς, an axe, alluding to the form and office of its bill: in modern Greek κουρκουιστης. Pliny terms it *picus arborarius*. The Hebrew name is *anapha*, and according to others *bleschiat*. In Italian *pico*, or *picchio*. In German *specht*. In Flemish *spicht*. In Spanish *bequebo*. In Polish *dziewiol*. In Turkish *sagariack*. Of these birds there are fifty-three species, besides varieties. They are common to both continents; haunt among rotten decayed trees, and sometimes bore into such as are fresh, in search of insects and larvæ; they cut or saw with their bill, and make a grating noise; they are guided to their prey by the ear, and extract it from the cavities by injecting the bill.

It may be observed that animals alone which live upon the fruits of the earth, join in society. Nature entertains them with a perpetual banquet, and abundance begets those gentle dispositions which are fitted for social intercourse. Other animals are constantly engaged in the pursuit of prey; urged by want, restrained by apprehensions of danger, they depend for subsistence on the vigour of their own exertions: they have scarcely time to satisfy their immediate desires, and no leisure to cherish the benevolent affections. Such is the solitary condition of all the carnivorous birds, except a few cowardly tribes which prowl on putrid carrion, and rather combine like robbers than unite as friends. And of all the birds which earn their subsistence by spoil, none leads a life so laborious and so painful as the woodpecker. Nature has condemned it to incessant toil and slavery. While others freely employ their courage or address, and either shoot on rapid wing, or lurk in close ambush, the woodpecker

pecker is constrained to drag out an insipid existence in boring the bark and hard fibres of trees, to extract its humble prey. Necessity never suffers any intermission of its labours; never grants an interval of sound repose: often during the night it sleeps in the same painful posture as in the fatigues of the day. It never shares the cheerful sport of the other inhabitants of the air: it joins not their vocal concerts, and its wild cries, and saddening tones, while they disturb the silence of the forest, express constraint and effort. Its movements are quick; its gestures, full of inquietude; its looks, sad and melancholy; it shuns all society, even that of its own kind; and, when it is prompted by lust to seek a companion, its appetite is not softened by delicacy of feeling.

Such is the narrow and gross instinct suited to a mean and gloomy life. The organs with which the woodpecker is furnished, correspond to its destination. Four thick nervous toes, two turned forwards, and two backwards, the one resembling a spur, being longest and stoutest; all of them armed with thick hooked nails, connected to a very short and extremely muscular foot; enable the bird to cling firmly, and to creep in all directions, on the trunks of trees, which it perpetually lacerates and bores. The substance of its bill is hard and solid, and rises out of the cranium, which is very thick. Powerful muscles act upon its short neck, and direct its incessant blows, which sometimes penetrate even to the pith of the wood. It darts its long tongue, which is tapered and rounded like an earth-worm, and tipped with a hard bony point, like a needle. It breeds in the cavities which it has in part formed itself; the progeny issue from the heart of the tree, and, though furnished with wings, they are almost confined to the verge of its circumference, and condemned to tread the dull round of life. The three only species of woodpeckers known in Europe are *the green, the black, and the variegated*. These have no

varieties in our climates, and would seem to have migrated from the parent families in both continents.

THE GREEN WOODPECKER.

THIS is the best known, and the most common of the species. It arrives in the spring, and makes the forests resound with its shrill harsh cries, which are heard at a great distance. These sounds are uttered chiefly when it bounds in the air, sinking, and again rising by starts, and describing its waved tracks; but, though it mounts only to a small height, it can fly from wood to wood. In the pairing season, it has, besides its ordinary cry, a call of courtship, which resembles in some measure a loud laugh, repeated thirty or forty times in succession. Aldrovandus says, that it is silent in summer; probably it resumes its cry in autumn, for in that season we hear it most.

The green woodpecker is seen oftener on the ground than any of the others, particularly near ant-hills, where it inserts its long tongue into the narrow hole through which the ants commonly issue, and, as soon as it feels the tip covered with these insects, it withdraws, and swallows them. But when these little republicans are inactive and still, or torpid with cold, the bird assaults their citadel, and, employing both feet and bill, soon makes a breach, and quickly devours them and their chrysalids. At other times it creeps against the trees, which it strikes with incessant blows; and, labouring with the most strenuous activity, it often strips them of all their bark, and does great injury to timber trees. The strokes of its bill are audible at a distance, and may be distinctly counted. In other respects it is indolent, and will suffer a person to approach near it, and will endeavour only to conceal itself, by warping round the branch, and clinging on the opposite side. It has been said, that, after a few knocks, it removes to another part of the tree to observe if it has pierced it; but its view is rather to gather on the bark the insects

sects which it has roused and put in motion: and, what is more certain, it judges from the sound of the blow in what crannies the worms are lodged, or where there is a proper cavity for its own accommodation.

It usually forms its nest in the heart of some worm-eaten tree, at the height of fifteen or twenty feet from the ground, and ofteneft in the softer kinds of wood, the aspin, or the willow, rather than the oak. Both male and female, by turns, labour incessantly in boring the fresh part of the timber, until they penetrate to the rotten center. Then they fashion and enlarge the cavity, and throw out with their feet the chips and wood-dust: sometimes they make the hole so deep and crooked, that the light cannot enter, and they rear their young in the dark. They commonly lay five eggs, which are greenish, with small black spots. The infant brood begin to creep before they are able to fly. The parents seldom leave them; they roost very early, and repose in their holes till day.

Some naturalists have thought the green-woodpecker was the rain-bird of the ancients, *pluvie avis*, because it is generally believed to foretel rain by an unusual cry, which is drawling and plaintive, and may be heard at a very considerable distance; hence it is by some called *rain-fowl*. And, as this bird was thought to shew a foresight of the state of the atmosphere, superstition naturally ascribed to it a more profound and wonderful sagacity. The woodpecker held a principal rank among the ancient auguries; its history or fable was interwoven with the mythology of the heroes of *Latium*; its gestures were regarded as significant; and its appearance foreboded impending fate. Gesner and Pliny relate the following curious incidents relative to the woodpecker. Picus, son of Saturn, and father of Faunus, was grandfather of King Latinus. For despising the love of Circe, he was changed into a green woodpecker: he became one of the rural gods, under the name of Picumnus. While the she-wolf suckled

Romulus and Remus, this sacred wood-pecker was seen to alight on their cradle. See Gefner, p. 678. A woodpecker alighted on the head of the prætor Ælius Tubero, while he was sitting on his tribunal in the forum, and suffered itself to be taken by the hand. The augurs, being consulted on this prodigy, declared, that the empire was threatened with destruction if the bird was liberated, and the prætor with death if it was kept. Instantly Tubero tore it with his hands; shortly after, Pliny adds, the response was fulfilled. Lib. x. 18.

The green woodpecker is found in both continents; and, though it contains few individuals, they are widely spread. The green woodpecker of Louisiana is the same with that of Europe; and that of the Antilles is only a variety. Gmelin mentions his having seen, among the Tunguse Tartars, a cinereous green woodpecker, which must be a-kin to the European. The Tunguses of Nijaiia-tunguoka (says he) ascribe virtues to the cinereous green woodpecker; they roast this bird, pound it, mix it with any sort of fat except that of bears, because this quickly grows rancid, and with this compound besmear the arrows which they use in the chase: an animal struck with one of these arrows instantly falls."

Albertus and Scaliger were assured that the green woodpecker could learn to speak, and that it sometimes pronounces words distinctly: Willoughby justly disbelieves it. The structure of its tongue appears entirely unfit to articulate sounds; and its wild intractable nature cannot submit to education: for how could a bird be trained in the domestic state, which lives only upon the insects that lurk under the bark of trees. The Viscount de Querhoent assures us, however, that he kept them at least for some time; but he confirms the idea of their untractable disposition. I have seen, says he, young green woodpeckers which I was rearing, and which were still in the nest, fight with each other obstinately.

stinately. When I opened trees where was a brood, the parents constantly forsook them, and left them to perish of hunger. The woodpeckers are vicious and quarrelsome; birds weaker than them are ever their victims; they break the scull with their bill, without afterwards preying on it. I had one in a room with partridges, and it killed them all one after another. When I entered, it climbed up my legs. It walked out into the fields, and returned to eat in its room. They are very familiar, but feel no attachment.

According to Frisch, the males alone have red on the head; and Klein makes the same assertion. Salerne says, that they were mistaken, and that the young ones have all the upper side of the head red, even in the nest. According to the observation of Linnæus, this red varies, and appears mixed sometimes with black spots, and sometimes with grey ones, and, in a few instances, without any spots at all. Some individuals, which are probably old males, assume a red tint on the two black mustachoes which arise from the corners of the bill, and their colours are in general more vivid.

Frisch relates, that in Germany during winter, the green woodpeckers plunder bee-hives. When we dissect them, we commonly find the crop filled with ants. They have no *cæcum*, which is wanting equally in all birds of this kind; but instead of it there is a dilatation of the intestine. The gall-bladder is large; the alimentary canal two feet long; the right testicle round, the left one oblong and arched, which is the natural structure, since it was verified on a great number of subjects. But the mechanism of the tongue has been a subject of admiration among all naturalists. Borelli and Aldrovandus have described the form and functions of that organ: Olaus Jacobæus in the Acts of Copenhagen, and Mery in the Memoirs of the Academy of Sciences at Paris, have delineated its curious anatomy. The tongue of the green woodpecker is, accurately speaking, only the bony tip, and what

is usually taken for the tongue is the *os hyoides* invested with a membranous coat, and extending backwards into two long branches, at first osseous, and afterwards cartilaginous : these, after encircling the windpipe, reflect towards the head, and, running close in a furrow along the skull, they are inserted on the forehead at the root of the bill. They are elastic cords, furnished with an apparatus of muscles, both *extensors* and *retractors*, which serve to move and direct the tongue. The whole is sheathed by the prolongation of the skin, which lines the lower mandible, and which extends when the *os hyoides* is protruded, and collapses, in annular wrinkles, as that bone is retracted. The bony tip, which is the real tongue, is connected to the extremity, and covered with a scaly horn, beset with small hooks bent back : and, that it may be capable both to hold and to pierce its prey, it is naturally moistened with a viscous fluid, that distils from two excretory ducts which rise from a double gland.--- After this structure the tongue of all woodpeckers is fashioned ; indeed we might conclude from analogy, that it also obtains in such birds in general as protrude their tongue by extending it.

The green woodpecker has a very large head, and can bristle the red feathers that cover its crown, which induced Pliny to term it tufted. It is sometimes caught by the decoy, but very rarely : it answers not the call so much as the noise made by striking the tree where it lodges, and which resembles that usually occasioned by its own boring. It is very coarse food, and always exceedingly lean and dry ; though Aldrovandus says, that these birds are eaten in winter at Bologna, and are then pretty fat : this acquaints us, at least, that they remain during that season in Italy, while they disappear in England.

Specific character of the *picus viridis* : " It is green, its head crimson." Synonymes.---Le pic vert, Buff. *Picus viridis*, Linn. Gmel. &c. &c. Wood-spice,
rain-

rain-fowl, high-hoe, or hew-hole, *Will.* Aristotle terms it *κολοις*. Among the Romans it received the appellation of *picus Martius*, being consigned to the God of War; in Italian it bears the names *piccio* and *pico verde*; In German, *grun-specht*; in Swedish *wed-knarr*, *groen-joeling*, and *groen-spick*; in Danish and Norwegian, *gron-spæt* and *gnul-spæt*; in Lapponic, *zhiane*.

THE GREEN WOODPECKER OF THE PHILIPPINES.

CAMEL, in his account of the birds that inhabit the Philippines, and Gemelli Carreri, agree, that in those islands there is a species of green woodpecker as large as an ordinary hen; meaning probably with regard to length, and not to bulk. It is called *palalaca* by the islanders, but *berrero*, or the forger, by the Spaniards; on account of the loud noise it makes in striking against the trees, and which may be heard, says Camel, at the distance of three hundred paces. Its voice is coarse and raucous; its head red and tufted; its plumage of a green ground. Its bill is extremely firm and solid, and enables it to excavate its nest in the hardest trees. Synonyme.---*Picus Philippinarum*, *Lath.*

SPOTTED GREEN WOODPECKER OF THE PHILIPPINES.

THIS differs entirely from the former in its size and colours. Sonnerat calls it the *speckled woodpecker*. It is of an intermediate bulk between the variegated and green woodpeckers, though nearer that of the latter: on each feather in the whole of the fore side of the body, there is a spot of dusky white, framed in blackish brown, which forms a rich enamel; the mantle of the wings is rufous, tinged with aurora-yellow, which, on the back, assumes a more brilliant hue, verging on red; the rump is carmine; its tail rusty

514 NATURAL HISTORY

grey ; and its head bears a tuft, waved with yellowish rufous on a brown ground. Synonymes.--*Picus Mannillensis*, *Gmel.* Manilla green woodpecker, *Lath.*

THE GREEN WOODPECKER OF GOA.

THIS is smaller than the European. The red feathers on its head are gathered into a tuft, and its temples are bordered by a white stripe, which widens on the arch of the neck ; a black zone descends from the eye, and, tracing a zigzag, falls upon the wing, whose small coverts are equally black ; a fine gold spot covers the rest of the wing, and terminates in greenish yellow on the small quills ; the great ones are as it were indented with spots of greenish white, on a black ground ; the tail is black ; the belly, the breast, and the fore side of the neck, as far as under the bill, are mailed lightly with white and black. This bird is one of the most beautiful of the woodpeckers. Synonyme.---*Picus Goensis*, *Gmel.*

THE SPOTTED BENGAL WOODPECKER.

IT is of the same size with the preceding, and similar to it. The gold colour is more spread on the wings, and covers the back also ; a white line, rising from the eye, descends on the side of the neck ; the tuft, though more displayed, appears only on the back of the head, whose crown and fore side are clothed with small black feathers, beautifully spotted with white drops ; the breast and stomach are white, crossed and mailed with blackish and brown, but less so in this than the preceding. These minute differences would not perhaps be sufficient to distinguish the two species ; but the former woodpecker has its bill one third longer than that of the Bengal. Specific character of the *picus Bengalensis* : it is green, its crest red, its nape black ; below and before it is white spotted with black. Synonymes.---*Picus Bengalensis*, *Linn. Gmel. Klein,*
and

and *Gesner*. Bengal creeper, *Albin*. Spotted Indian woodpecker, *Edw*.

THE GREEN WOODPECKER OF BENGAL.

IT is crested; above yellowish green, below white; the margins of its feathers, brown; its crest, red; the fore part of its head, and the lower part of its neck, variegated with white and black; the upper part of its neck, black; a bright white bar extending from the eyes along the sides of the neck; its tail-quills blackish, shaded with dull green.

THE CAPE WOODPECKER.

IT is orange above, shining with a golden hue; below dirty white; the margins of its feathers, brown; the upper and back part of its head, red; the upper part of its neck and its rump, blackish; a bright white bar extended from the nostrils below the eyes, and along the sides of the neck; its tail-quills blackish.

THE GREEN WOODPECKER OF SENEGAL.

THIS woodpecker, which is termed *goertan* at Senegal, is not so large as the green woodpecker, and scarcely equal to the variegated one. The upper surface of the body is brown grey, tinged with dull greenish, spotted on the wings with waves of faint white, and interrupted on the head and rump by two marks of fine red; all the under surface of the body is grey stained with yellowish. Synonymes.---*Picus-goertan*, *Gmel*. Crimsom-rumped woodpecker, *Latham*.

THE STRIPED WOODPECKER OF SENEGAL.

THIS woodpecker is not larger than a sparrow; the upper side of its head is red; a brown half-mask passes over the front, and behind the eye; the plumage, which is waved on the fore part of the body, exhibits small festoons, alternately brown, grey, and

dull white; the back of a fine gold fulvous, which also tinges the great quills of the wing, whose coverts, as well as those of the rump, are greenish. Though much inferior in size to the European woodpeckers, we shall find that this African species is by no means the smallest of this extensive genus. Synonymes.---*Picus Senegalensis*, *Gmel.* Gold-backed woodpecker, *Lath.*

THE PERSIAN WOODPECKER.

THIS species differs but little in size from the common green woodpecker; only it hath a thicker head and neck, and a longer bill; the feathers, from the middle of the crown to the end of the tail, have something of the ferruginous; the feet are of a pale blue, the claws black; the rest of the body is yellow, except that all the wing-feathers' ends or tips incline somewhat to ferruginous; and that a spot of the same colour encompasses the eyes. It is a native of Persia. Synonymes.---*Picus Persicus*, *Gmel.* *Picus luteus Persicus*, *Briss.* *Picus luteus cyanopus Persicus*, *Aldrov.* *Picchio giallo* (yellow), *Zinn.*

THE ORANGE WOODPECKER.

ALMOST all the woodpeckers have a mottled plumage, but in the present no colours are set in contrast. A dull olive brown covers the back, the neck, and the breast; the rest of the plumage is deep grey, which is only somewhat lighter on the head; there is a red tinge at the origin of the tail.---This species is not so large as a lark. Specific character of the *picus aurantius*: Above it is orange; its nape, its rump, and the quills of its tail, are black. Synonymes.---*Picus aurantius*, *Linn.* and *Gmel.* *Picus capitis bonæ spei*, *Briss.* Orange woodpecker, *Lath.*

THE STRIPED WOODPECKER OF ST. DOMINGO.

BRISSON describes this bird in two different places; first under the name of *the striated woodpecker of St. Domingo*, and again under that of *the little striated woodpecker of St. Domingo*, which he regards as two distinct species. But a single inspection will suffice to shew, that the differences result solely from age or sex. In the first, the crown of the head is black; the throat grey; the olive tinge of the body lighter, and the black stripes on the back are not so broad, as in the second, which has the whole of the crown of the head red, and the fore part of the body dull, with the throat white; but, in other respects, their shape and plumage are perfectly similar. This bird is nearly as large as the variegated woodpecker; all its upper garb is cut transversely with black and olive bars; the green tinge appears on the grey of the belly, and more vividly on the rump, whose extremity is red; the tail is black. Synonymes.- *Picus striatus, Gmel.* *Picus Dominicensis striatus, Briss.* Rayed woodpecker, *Lath.*

THE PASSERINE WOODPECKER OF ST. DOMINGO.

THIS species is six inches long, and nearly of the same size with the lark; the crown of the head is red, and its sides rusty grey; all the upper surface is yellowish olive, and all the under surface striped across with whitish and brown; the quills of the wing are olive, like the back, on the outside, and on the inside brown, and fringed on the edge with whitish spots, deeply engrained; a character in which it resembles also the green woodpecker: the feathers of the tail are grey mixed with brown. Notwithstanding its diminutive size, this woodpecker is one of the stoutest; and it pierces the hardest trees. It is alluded to in the following extract from an American historian: "The carpenter

carpenter is a bird not larger than a lark; its bill is about an inch long, and so strong, that in the space of one day it will bore into the heart of a palm-tree: and we may observe, that this wood is so hard, as to spoil the edge of our best cutting tools." Specific character of the *picus passerinus*: It is yellowish olive, striped below with brown and bright whitish. Synonymes.---*Picus passerinus*, Linn. and Gmel. *Picus Dominicensis minor*, Briss. Passerine woodpecker, Lath.

THE GREAT STRIPED WOODPECKER OF CAYENNE.

THE crest of this bird is of a gold fulvous, or rather aurorated; there is a purple spot at the corner of the bill; the feathers are fulvous and black, with which the whole body is alternately variegated: and these characters are sufficient to discriminate it. It is of the same size with the green woodpecker; its plumage is richly mailed with yellowish fulvous and fine black, which intermingle in waves, in spots, and in festoons; a white space in which the eye is placed, and a black tuft on the front, give a marked aspect to this bird, and which is still heightened by the red crest and purple mustachio. Specific character of the *hirundo melanochloros*: This is variegated with black and bright yellow, its crest golden, its tail black. Synonymes.---*Picus melanachloros*, Gmel. The gold-crested woodpecker, Lath.

THE LITTLE STRIPED WOODPECKER OF CAYENNE.

OF the striped woodpeckers, which Brisson ranges after the variegated woodpecker, several belong undoubtedly to the green woodpecker. This is particularly true of the striped woodpeckers of St. Domingo, and that of Cayenne, which we are now to describe. In fact these three have a yellowish green cast, analogous to the colour of the green woodpecker, and the

undulated rays that spread on the plumage seem to be enlarged from the model of those which mark the wing of the European bird.

The little striped woodpecker of Cayenne is seven inches and five lines in length. It resembles much the striped woodpecker of St. Domingo in its colours, but is smaller; black waved bars extend on the olive-grey brown of its plumage; grey, fringed with black, covers the two exterior quills of the tail on each side, the six others are black; the back of the head is red; the front and throat are black, only this black is intersected by a white spot lying under and extending back. Synonyms.---*Picus Cayanensis*, *Gmel.* Cayenne woodpecker, *Lath.*

THE YELLOW WOODPECKER OF CAYENNE.

THOSE birds, which are enamoured of the solitude of the desert, have multiplied in the vast forests of the new world; and the more so, as there man has yet encroached little on the antient domains of nature. We have received ten species of woodpeckers from Guiana, and yellow woodpeckers seem peculiar to that country. Most of these are scarcely known to naturalists, and Barrere has only noticed a few. The first species is described by Brisson under the name of *white woodpecker*: its plumage is of a soft yellow; the tail black; the great quills of the wings brown, and the middle ones rufous; the coverts of the wings are brown grey, fringed with yellowish white. It has a crest which reaches to its neck, and which, as well as the whole of the head, being pale yellow, is strongly contrasted with its red mustachoes; its appearance is thus remarkable, and the soft uncommon colour of its plumage distinguishes it from the rest of its genus. The creoles of Cayenne call it the *yellow carpenter*. It is smaller than the green woodpecker, and much more slender; its length nine inches. It forms its nest in large trees, rotten at the core; after it has bored horizontally

horizontally to the decayed part, it descends, and continues the excavation to the depth of a foot and a half. The female lays three eggs, which are white, and almost round; and the young are hatched in the beginning of April. The male shares the female's solicitude, and, during her absence, he plants himself in the entrance. His cry is a whistle composed of six notes, the first of which are monotonous, and the two or three last flatter. The female has not the bright red bar which appears in the male on each side of the head.

There is some variety in this species, certain individuals having all the small coverts of the wings of a fine yellow, and the great ones edged with that colour; in others, such as that probably which Brisson described, the whole plumage is discoloured and bleached, so as to appear only a dirty white or yellowish. Synonymes.---*Picus exalbidus*, *Gmel.* *Picus Cayanensis albus*, *Briss.* *Picus flavicans*, *Lath.*

THE FERRUGINOUS WOODPECKER.

A FINE bright red, which is brilliant and golden, forms the superb attire of this bird. It is almost as large as the green woodpecker, but not so stout. A long yellow crest in pendulous filaments covers the head, and falls backwards; from the corners of the bill, rise two mustachoes of a fine light red, traced nicely between the eye and the throat; some white and citron spots embellish and variegate the rufous ground of the middle of the upper surface; the rump is yellow, and the tail black. The female, both of this species, and of the yellow woodpecker which comes from the same country, has no red on the cheeks. Synonymes.---*Le pic mordore*, *Buff.* *Picus cinnamomeus*, *Gmel.*

THE BLACK-BREASTED WOODPECKER.

THIS is also one of the yellow *carpenters* of Cayenne. It has a fine black horse-shoe, which meets the neck behind, covers all the fore part like a cravat, and



The Rufous Woodpecker.

Published July 1799.

and falls on the breast; the rest of the under side of the body is rusty fulvous, and also the throat and the whole head, whose crest extends to the neck; the back is of a bright rufous; the wing is of the same colour, but the quills crossed with a few black streaks pretty much asunder, and some of these extend to the tail, which has a black tip. This Cayenne bird is as large as the yellow woodpecker, or even the ferruginous woodpecker: all the three are alike slender, and similarly crested. The natives of Guiana give them the common name of *toucoumari*. It appears that the black-breasted woodpeckers lead a life as laborious as the others, and that they inhabit St. Domingo also; for Father Charlevoix assures us, that the wood employed for building in that island is often found bored so much by these birds, as to be unfit for use. Synonymes.---*Le pic à cravate noire, Buff. Picus multicolor, Gmel.*

THE RUFOUS WOODPECKER.

THE plumage of this little woodpecker has a singular property, viz. the under side of its body is of a deeper hue than the upper, contrary to what is observed in all other birds. The ground colour is rufous, of various intensity; deep on the wings; more dilute on the rump and back, more charged on the breast and belly, and mingled, on all the body, with black waves, which are very crowded, and which have the effect of the most beautiful enamel: the head is rufous, embellished and crossed by small black waves. This woodpecker, which is found in Cayenne, is scarcely larger than the wryneck, but it is rather thicker: its plumage, though it consists of only two dull tints, is one of the most beautiful and most agreeably variegated. Specific character of the *picus rufus*: "It is rufous, waved with black." Synonyme.---*Picus rufus, Gmel.*

THE LITTLE YELLOW-THROATED WOODPECKER.

THIS bird is not larger than the wryneck. The ground colour of its plumage is brown tinged with olive, and having white spots or scales on the fore part of the body, and under the neck, which is spread with a fine yellow that stretches under the eye, and on the top of the neck; a red hood covers the crown of the head, and a mustachoe of that colour diluted rises from the corners of the bill. This woodpecker, as well as preceding, is found in Cayenne. Specific character of the *picus chlorocephalus*: "It is olive, below spotted with white; its neck and its half-crested head bright yellow; its top red." Synonymes.---*Picus chlorocephalus*, *Gmel.* *Picus icterocephalus*, *Lath.*

THE GOLD-WINGED WOODPECKER.

THOUGH this beautiful bird closes the family of the green woodpeckers, yet it seems to emerge from even the genus of the *Picus*, both by its habits and some of its features. Catesby, who observed it in Carolina, tells us, that it is oftenest on the ground, and does not creep upon the trunks of trees, but perches on their branches like other birds. Yet its toes are disposed two before, and two behind, like the woodpeckers; and, like them too, the feathers of its tail are stiff and hard; and, what is peculiar to itself, the side of each is terminated by two small filaments. Its bill is, however, dissimilar to that of the woodpeckers; it is not squared, but rounded, and somewhat curved, pointed, and not formed into an edge. If this bird resembles then the woodpeckers in the structure of its feet and tail, it differs in the shape of the bill, and in its habitudes, which necessarily result from the conformation of that principal organ in birds. It seems to form an intermediate species between the woodpeckers and the cuckoos, with which some naturalists have

have classed it; and it furnishes another example of those slender shades by which nature connects her various productions. It is about the size of the green woodpecker, and is remarkable for its beautiful form, and the elegant disposition of its rich colours; black spots, like crescents and hearts, are scattered on the stomach and belly on a white ground of a dingy cast; the forepart of the neck is vinous, cinereous, or lilac, and, on the middle of the breast, there is a broad black zone, shaped like a crescent; the rump is white; the tail black above, and lined below with a fine yellow resembling dead leaves; the upper side of the head, and the top of the neck, are of a lead-grey, and the back of the head is marked with a fine scarlet spot; from the corners of the bill two large black mustachoes take their origin, and descend on the sides of the neck, and they are wanting in the female; the back is of a brown ground, with black streaks; the great quills of the wing are of the same cast; but what decorates it, and suffices alone to discriminate the bird, the shafts of all these quills are of a gold colour. It is found in Canada and Virginia, as well as in Carolina.

Specific character of the *picus auratus*: "It is streaked transversely with grey and black, its throat and breast are black, its nape red, its rump white." Synonymes.---*Picus auratus*, Linn. Gmel. and Borowsk. *Picus Canadensis striatus*, Briss. *Cuculus alis deauratis*, Klein.

THE BLACK WOODPECKER.

THIS species of European woodpecker appears to be confined to some particular countries, and especially to Germany. However, the Greeks, as well as we, were acquainted with three species of woodpeckers, and Aristotle mentions them all: the first, says he, is smaller than the blackbird, and is our variegated woodpecker; the second is larger than the blackbird, and is the *κολοι*, or our green woodpecker; and the third, he re-

presents as equal in size to a hen, which must be understood of its length, and not of its thickness; and it is therefore this black woodpecker, the largest of all the woodpeckers of the ancient continent. It is sixteen inches long, from the tip of the bill to the end of the tail; the bill measures two inches and a half, and is of a horn colour; a bright red hood covers the crown of the head; the plumage of the whole body is deep black. The German names *kräbe-specht* and *holtz-kräbe*, crow-spight and woodcrow, mark both its colour and its size.

It is found in the tall forests on the mountains of Germany, in Switzerland, and in the Vosges: it is unknown in England and France, and seldom descends into the low country. It is said to have deserted Holland: but this is evidently not on account of the cold of those regions, since it inhabits the forests of Sweden. But it is difficult to imagine why it is not found in Italy, as Aldrovandus asserts. Even in the same country, these birds prefer particular districts that are solitary and wild; Frisch mentions a forest in Franconia, noted for the multitude of black woodpeckers which it contains. In general the species is not numerous; and, in the extent of half a league, we can seldom find more than a single pair. They settle in a certain spot, which they scarcely ever leave.

This bird strikes the trees with such force, that according to Frisch, it may be heard as far as a hatchet. It bores to the heart of the trunk, and forms a very capacious cavity; as much as a bushel of wood-dust and chips is often seen on the ground below its hole; and sometimes it hollows out the substance of the trees to such a degree that they are soon borne down by the wind. They prefer the decayed trees, but, as they also attack those which are sound, the careful proprietors of woods are at pains to destroy them. M. Deslandes, in his essay on the ship building of the ancients, regrets, that there are few trees fit for making
oars

oars forty feet long, which are not bored by the woodpeckers.

The black woodpecker lays, in the bottom of its hole, two or three eggs, which are white; as in all birds of the genus, according to Willoughby. It seldom alights on the ground; the ancients affirmed even, that no woodpecker ever descends from its tree. When they clamber, the long hind toe is sometimes placed sidewise, and sometimes forwards, and is moveable in its joint with the foot, so as to accommodate itself in every position; this power is common to all the woodpeckers. After the black woodpecker has perforated into the cavity of the tree, it gives a loud scream, which is audible at a great distance. It also makes at times a cracking, or rather a scraping, by rubbing its bill rapidly against the sides of its hole.

The female differs from the male in its colour, being of a lighter black, and having no red but on the back of the head, and sometimes none at all. It is observed that the red descends lower on the nape of the neck in some individuals, and these are old males. The black woodpecker disappears from Germany during winter. Agricola supposed that it remained concealed in hollow trees: but Frisch affirms, that it retires before the rigour of the season, when its provisions fail; for, continues he, the worms then sink deep into the wood, and the ant-hills are covered with ice and snow. We know not of any bird of the ancient continent, whether in Asia or Africa, that is analogous to this European woodpecker; and it would seem to have migrated hither from the new world, where many species occur that closely resemble it.

Specific character of the *picus martius*, Linn. "It is black with a crimson cap." Synonymes.--- *Picus martius*, Linn. and Gmel. *Picus niger*, Briss. Klein, and Frisch. *Picus maximus*, Ray and Will. Great black woodpecker, Alb. and Lath.

THE

THE CAROLINA WOODPECKER.

THIS woodpecker is a native of Carolina, and is the largest of the genus, being equal or even superior in bulk to the crow. Its bill is white like ivory, and three inches long, channeled through its whole length, and so sharp and strong, says Catesby, that, in an hour or two, the bird often makes a bushel of chips: hence the Spaniards term it *carpenteros*, or carpenter.

Its head is decorated behind by a great scarlet tuft, one of which falls on the neck, and the other is raised, and covered by long black threads, which rise from the crown and invest the whole head, for the scarlet feathers lie behind: a white stripe, descending on the side of the neck, and making an angle on the shoulder, runs into the white that covers the lower part of the back and the middle quills of the wing; all the rest of the plumage is a jet deep black.

It hollows its nest in the largest trees, and breeds during the rainy season. It is found, too, in hotter climates than that of Carolina; for we recognise it in the *picus imbrifetus* of Nieremberg, and the *quatotomomi* of Fernandez; though there are some differences which would seem to indicate a variety, its white bill, three inches in length, suffices to discriminate it. This woodpecker, says Fernandez, inhabits the regions bordering on the South Sea. The North Americans work the bills into coronets for their warriors, and, as they cannot procure these in their own country, they buy them of the more southern Indians, at the rate of three deer-skins for each bill.

Specific character of the *picus principalis*: "It is black, its crest scarlet, a line on either side of the neck; the secondary feathers of its tail, white." It is a scarce bird in North America, and never penetrates beyond the Jerseys. It breeds in a winding hole, the better to screen the young from the insinuating rains. Synonymes.---Le grand pic noir à bec blanc, Buff. *Picus principalis*,

principalis, *Linn.* and *Gmel.* *Picus Carolinensis cristatus*, *Briss.*

THE PILEATED WOODPECKER.

THIS woodpecker, which is common in Louisiana, occurs equally in Carolina and in Virginia. It resembles much the preceding, but its bill is not white, and it is rather smaller; though it somewhat exceeds the black woodpecker of Europe. The crown of the head, as far as the eyes, is decorated by a large scarlet crest, collected into a single tuft, and thrown backwards in the shape of flame; above there is a black bar, in which the eye is placed; a red mustachoe is traced from the root of the bill on the black sides of the head; the throat is white; a fillet of the same colour passes between the eye and the mustachoe, and extends on the neck as far as the shoulder; all the rest of the body is black, with some slight marks of white on the wing, and a larger spot of that colour on the middle of the back; under the body, the black is lighter, and mixed with grey waves; in the female, the fore part of the head is brown, and there are no red feathers, but on the hind part of the head.

Catesby says that these birds, not content with rotten trees which supply their usual food, attack also the plants of maize; and do much injury, for the wet insinuates into the holes which they make in the husk, and spoils the seeds. But is their motive not to get some kind of worms that lurk in the ear, since no bird of this genus feeds on grain?

With this bird, we must also join a woodpecker which Commerçon brought from the country contiguous to the Straits of Magellan. Its bulk is the same and its other characters pretty similar; only it has no red, except on the cheeks and the fore part of the head, and the back of its head bears a tuft of black feathers. Thus, the same species occurs, in the corresponding latitudes at the two extremities of the great

continent of America. Commerſon remarks that this bird has a ſtrong voice, and leads a very laborious life; a character that belongs to all the woodpeckers, which are enured to toil and hardſhip. Specific character of the *picus pileatus*: "It is black, its creſt red, its temples and wings marked with white ſpots." It is half the weight of the preceding ſpecies: it ſpreads over the whole extent of North America: lays ſix eggs, and hatches in June. The Indians decorate their calumets with its ſcarlet tuft. Synonymes.---Le pic noir à huppe rouge, *Buff.* *Picus pileatus*, *Linn.* and *Gmel.* *Picus niger Virginianus criſtatus*, *Briff.* *Picus niger*, toto capite rubro, *Klein.* Larger red-creſted woodpecker, *Cateſby.*

THE LINEATED WOODPECKER.

THIS bird is the *ooantoo* of the Americans, which Barrere has inaccurately pronounced *ventoo*, and the *bipecoo* of Marcgrave. It is as long as the green woodpecker; but not ſo thick; its upper ſurface is entirely black, except a white line which, riſing from the upper mandible, deſcends like a cincture on the neck, and ſtrews ſome white feathers on the coverts of the wings; the ſtomach and belly are waved with black and white bars, and the throat is ſpeckled with the ſame; from the lower mandible, proceeds a red muſtache; a beautiful creſt of the ſame colour covers the head and falls backwards; and under the long threads of this creſt, we perceive ſmall feathers of the ſame red which clothe the top of the neck. Specific character of the *picus lineatus*: "It is black; its creſt crimſon: a white line on either ſide of the neck from the bill to the middle of the back." Synonymes.---L'Ouantou, ou pic noir huppé de Cayenne, *Buff.* *Picus lineatus*, *Linn.* and *Gmel.* *Picus varius Braſilienſis*, *Ray.* *Picus niger Cayanenſis criſtatus*, *Briff.*

THE

THE RED-NECKED WOODPECKER.

THE head and neck of this bird are of a beautiful red colour. It is rather longer than the green woodpecker, its neck and tail being elongated, which makes its body appear less thick; all the head and neck is covered with feathers to the breast, where the tints of that colour melt into the fine fulvous that covers the breast, the belly, and the sides; the rest of the belly is deep brown, almost black where the fulvous mixes with the quills of the wing.---This bird is found in Guiana, as well as the preceding. Specific character of the *picus rubricollis*: "It is brown, below fulvous; its crested head, and its neck, ferruginous." Synonyme --- *Picus rubricollis*, *Gmel.*

THE LESSER BLACK WOODPECKER.

THIS is the smallest of the black woodpeckers, being only of the size of the wryneck. A deep black with blue reflections, covers the throat, the breast, the back and the head, except a red spot found on the head of the male; it has also a slight trace of white on the eye, and some small yellow feathers near the back of the head; below the body and along the sternum, there extends a bar of a fine poppy-red; it terminates at the belly, which like the sides is well enamelled with black and light grey; the tail is black.

There is a variety of this woodpecker, which, instead of the red spot on the crown of the head, has a yellowish crown completely encircling it; and this is the opening of those small yellow feathers seen in the former, and probably results from age.---The female has neither a red spot nor a yellow circle on the head. Synonymes.---*Picus flavipes*, *Gmel.* *Picus hirundinaceus*, *Linn.* and *Gmel.* *Picus niger* *Novæ Angliæ*, *Briss.* *Picus niger minimus*, *Klein.* Yellow-legged woodpecker, *Penn.*

THE RED-HEADED WOODPECKER.

THIS bird, described by Catesby, is found in Virginia : it is nearly as large as the variegated woodpecker of Europe. Its whole head is enveloped in a beautiful red *domino*, which is silky and glossy, and falls on the neck ; all the under surface of the body and the rump are white, and so are the small quills of the wing, of which the black joins that of the tail, to form, on the lower part of the back, a great white space ; the rest is black, and also the great quills of the wings, and all those of the tail.

Very few of these birds are seen in Virginia during winter ; there are more of them in that season in Carolina, though fewer than in summer ; it would seem that they retire to the South to escape the cold. Those which remain approach the villages, and even rap on the windows of the houses. Catesby adds that this woodpecker consumes much fruit and grain ; but it probably never recurs to these, unless in case of want of other sustenance. Synonymes.---Le pic noir à domino rouge, *Buff.* *Picus erythrocephalus*, *Linn.* *Gmel.* and *Briff.* *Picus capite colloque rubris*, *Klein.*

THE GREATER SPOTTED WOODPECKER.

ITS plumage is agreeably variegated with white and black, embellished with red on the head and belly. The crown of the head is black, with a red bar on the occiput, and the hood terminates in a black point on the neck ; thence rise two branches of black, one of which stretcheth on each side to the root of the bill, and marks a mustachoe, and the other, descending to the lower part of the neck, decorates it with a collar ; this black streak unites near the shoulder with the black piece that occupies the middle of the back ; two great white spaces cover the shoulders ; in each wing the great quills are brown, the others black, and all mixed with white ; the whole of the black is deep, and the whole

whole of the white is pure and unmixed; the red on the head is bright, and that of the belly is a fine scarlet. Thus the plumage of this bird is charmingly diversified, and surpasses that of all the other woodpeckers in beauty. This description answers only to the male; the female has no red on the back of the head. Some spotted woodpeckers are clothed with a less beautiful plumage, and some even are entirely white. There is also a variety whose colours appear more obscure; and, though all the upper side of the head and the belly are red, the tint is pale and dull.

The variegated woodpecker strikes against the trees with brisker and harder blows than the green woodpecker; it creeps with great ease upwards, or downwards, and horizontally under the branches; the stiff quills of its tail serve to support it when it hangs in an inverted posture, and knocks keenly with its bill. It is a shy bird; for, when it perceives a person, it hides itself behind a branch and remains still. Like the other woodpeckers, it breeds in a hollow tree. It approaches the habitations during winter, and seeks to settle on the bark of fruit trees, where the crysalids and eggs of insects are deposited in greater quantity than on the trees of the forest.

In summer, during droughts, it is seen repairing to the water-meadows to drink. It approaches the spot in silence, fluttering from tree to tree; and each time it halts it seems anxiously to examine if any danger threatens: it has an air of inquietude; it listens, and turns its head on all sides, and even looks through the foliage to the ground below; and the least noise is sufficient to drive it back. When it reaches the tree next the water, it descends from branch to branch, until it gets to the lowest on the margin of the brook; it then dips its bill, and at each sip it hearkens, and casts a look round it. After its thirst is quenched, it retires quickly, without making a pause as on its arrival. When it is shot on a tree, it seldom drops; but, as long as a

spark of life remains, it clings firmly to the branch or stem. Specific character of the *picus major*: "It is variegated with black and white; its vent, and the back of its head, red." It is found even in the most northern parts of Europe: its length nine inches, its weight two ounces and three quarters.

Synonymes.--L'epeiche ou le pic varié, *Buff.* *Picus major*, *Linn. Gmel. Bor. Kram. and Scop.* *Picus varius major*, *Ray, Will. and Briff.* *Picus discolor*, *Frisch.*

THE LESSER SPOTTED WOODPECKER.

THIS species resembles the former so closely, that it might be regarded as the same formed on a smaller scale, only the fore part of its body is dirty white, or rather grey; and it wants the red under the tail, and the white on the shoulders. As in the large species too, it is the male only that has its head marked with red. This little spotted woodpecker is scarcely so big as a sparrow, and weighs only an ounce. In winter it resorts near houses and vineyards. It does not creep very high on large trees, and seems to prefer the circumference of the trunk. It nestles in some hole of a tree, and often disputes the possession with the cole-mouse, which is commonly worsted in the struggle, and compelled to surrender its lodging. It is found in England, where it has received the name of *bick-wall*; it also inhabits Sweden; and this species, like the greater spotted woodpecker, would appear to be diffused even to North America, for in Louisiana a small spotted woodpecker is seen which resembles it almost entirely, except that the upper side of the head, as in the variegated woodpecker of Canada, is covered with a black cap edged with white.

M. Sonnerat saw, in the island of Antigua, a small variegated woodpecker, which we shall refer to this, since the characters which he gives are insufficient to discriminate two species. It is of the same bulk;
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black,

black, striped and streaked with white, covers all the upper surface of the body; the under surface is spotted with blackish, on a pale yellow, or rather yellowish white, ground; a white line marks the sides of the neck. Sonnerat did not perceive red on the head, but he remarks that it was perhaps a female.

Specific character of the *picus minor*: "It is variegated with white and black; its top red; its vent brick-coloured." Synonymes.---Petit epeiche, *Buff.* *Picus minor*, *Linn. Gmel. Bor. Kram. &c.* *Picus varius minor*, *Aldrov. Briss. and Gerini.* *Picus discolor minor*, *Frisch. and Klein.*

THE NUBIAN WOODPECKER.

THIS bird is a third smaller than the spotted woodpecker of Europe. All its plumage is agreeably variegated with drops and waves broken and as it were vermiculated with white and rusty on a grey-brown ground, and blackish on the back, and tears of blackish on the whitish complexion of the breast and belly; a half-crest of fine red covers like a cowl the back of the head; the crown and the fore part consist of delicate black feathers, each tipped with a small white drop; the tail is divided horizontally by brown and rusty waves. The bird is very handsome, and the species is new. Synonymes.-Epeiche de Nubie on-dé et tacheté, *Buff.* *Picus Nubicus*, *Gmel.*

THE CARDINAL WOODPECKER OF LUÇON.

THE feathers of the back and the coverts of the wing are black, but their shafts are yellow, and there are also yellowish spots on the latter; the small coverts of the wing are striped transversely with white; the breast and belly are variegated with longitudinal black spots on a white ground; there is a white bar on the side of the neck, extending below the eye; the crown and back of the head are of a bright red, and for this reason Sonnerat first gave it the appellation of cardinal.

534 NATURAL HISTORY

nal. Specific character of the *picus cardinalis*: "It is black; below, white spotted with black; its top, and the back of its head, red." Synonymes.---*Picus cardinalis*, *Gmel.* Cardinal woodpecker, *Lath.*

THE BROWN SPOTTED WOODPECKER.

THIS little woodpecker has only two dull faint shades; its plumage is blackish brown, waved with white on the upper side of the body, whitish spotted with brown speckles below; the head and tail, and also the quills of the wings, are all brown. It is hardly so large as the lesser spotted woodpecker.

Synonymes.---*Picus Moluccensis*, *Gmel.* Brown woodpecker, *Lath.*

THE CANADIAN WOODPECKER.

THIS bird is of the same size with the European spotted woodpecker, and differs only in the distribution of its colours. It has no red; and the space encircling the eye is not white, but black: there is more white on the side of the neck, and white or faint yellow on the back of the head. These differences however are slight; and the two contiguous species are perhaps the same, only altered by change of climate.

The *quaubtotopotli alter* of Fernandez, which is a woodpecker variegated with black and white, appears to be the same with this Canadian woodpecker, especially as that author never mentions its having any red, and seems to insinuate that it comes to New Spain from the North. Specific character of the *picus Canadensis*: "It is white; its top, its back, its shoulders, and the two middle quills of its tail, black; the rest, and the wings, variegated with white and black."

Synonymes.---*Picus Canadensis*, *Gmel.* *Picus varius Canadensis*, *Briff.*

THE VARIED WOODPECKER.

THIS is a handsome bird, equal in bulk to the Mexican



The Jamaica Woodpecker.

Published May 1st 1799.

Pale scalp.



Mexican crow: its plumage varied with white transverse lines on a black and brown ground; the belly and breast are vermillion. This woodpecker inhabits the coolest parts of Mexico, and bores the trees like the rest of the kind. Synonymes.---Epeiche du Mexique, *Buff.* *Picus tricolor*, *Gmel.*

THE JAMAICA WOODPECKER.

THIS is of a middling size, between the green woodpecker and the spotted woodpecker of Europe: Catesby makes it too small, when he compares it to the spotted woodpecker; and Edwards represents it too large, in asserting it to be equal in bulk to the green woodpecker. The same author reckons only eight quills in the tail; but probably the two others were wanting in the subject he described, for all the woodpeckers have ten quills in the tail. It has a red hood which falls on the arch of the neck; the throat and stomach are rusty grey, which runs by degrees into a dull red on the belly; the back is black, striped transversely with grey waves in festoons, which are lighter on the wings, broader and entirely white upon the rump. This bird is found in the island of Jamaica, and on the continent of America.

Specific character of the *picus Carolinus*: "Its cap and its nape are red; its back marked with black stripes; its middle tail-quills white dotted with black." Synonymes.---*Picus Carolinus*, *Linn.* and *Gmel.* *Picus varius Jamaicensis*, *Briss.* *Picus varius medius*, *Sloane.* *Picus varius medius Jamaicensis*, *Ray.* Jamaica woodpecker, *Edw.* Red-bellied woodpecker, *Catesby.* Carolina woodpecker, *Penn.* and *Lath.*

THE WOODPECKER OF LOUISIANA.

IT is rather larger than the spotted woodpecker: all the upper surface is agreeably striped with white and black, disposed in cross bands; of the quills of the tail, the two exterior and the two middle ones are mixed

mixed with white and black, the rest black; all the under surface and the fore part of the body are uniformly white; grey, and a little dilute red, tinges the lower belly. Of two specimens lodged in the royal cabinet, the one has the upper side of the head wholly red, and some streaks of the same colour on the throat and under the eyes: the other has its front grey, and no red but on the back of the head, and is probably the female, this being the usual difference between the sexes: in both of them, this red is of a feebler and lighter cast than in the other variegated woodpeckers. Synonyme.---*Picus Carolinus* var. *Gmel.* and *Lath.*

THE WOODPECKER OF ENCENADA.

THIS bird is about the size of the lesser spotted woodpecker, and is one of the handsomest of the genus. Its colours are simple, but its plumage is richly mailed, and the white and brown grey with which it is painted are so finely broken and intermingled as to produce a charming effect. The male has a full crest, and some red feathers appear in it; the female wants the crest, and her head is entirely brown.

Synonyme.---*Picus bicolor*, *Gmel.*

THE HAIRY WOODPECKER.

THE discriminating character of this bird is, a white bar, consisting of loose feathers, that extends quite along the back to the rump; the rest of the back is black; the wings too are black, but marked pretty regularly with spots of dull white, round, and in the form of tears; a black spot covers the crown, and red the back of the head, from which a white line extends to the eye, and another is traced on the side of the neck; the tail is black, all the under surface of the body white. Synonymes.----*Picus villosus*, *Linn.* *Gmel.* and *Klein.* *Picus varius Virginianus*, *Briss.*

THE

THE LITTLE WOODPECKER OF VIRGINIA.

WE owe to Catesby the account of this small woodpecker: it weighs rather more than an ounce and half, and resembles the hairy woodpecker so much, it is said, in its spots and colours, that, but for the difference of size, they might be regarded as of the same species. Its breast and belly are light grey, the four middle quills of its tail are black, and the rest barred with black and white. The female is distinguished from the male, as in all the woodpeckers, by having no red on the head.

Synonymes.---*Picus pubescens*, *Linn.* and *Gmel.* *Picus varius Virginianus minor*, *Briss.* and *Klein.* Smallest woodpecker, *Catesby.* Downy woodpecker, *Lawson* and *Penn.* Little woodpecker, *Lath.*

THE VARIEGATED WOODPECKER OF CAROLINA.

THOUGH this woodpecker has a yellow tinge on the belly, we shall not exclude it from those which are variegated with white and black, since these colours appear on the upper surface, which really characterizes the plumage. It is scarcely so large as the lesser woodpecker; all the upper side of its head is red; four stripes, alternately black and white, cover the space between the temple and the cheek, and the last of these stripes bounds the throat, which is of the same red with the head; the black and white intermingle and intersect each other agreeably on the back, the wings, and the tail; the fore part of the body is a light yellow, sprinkled with some black speckles. The female wants the red. This woodpecker inhabits, according to Brissot, Virginia, Carolina, and Cayenne. Synonymes.---*Picus varius*, *Linn.* and *Gmel.* *Picus Carolinensis*, *Briss.* and *Klein.* Yellow-bellied woodpecker, *Catesby*, *Penn.* and *Lath.*

THE VARIEGATED UNDULATED WOOD-PECKER.

THE plumage resembles that of the spotted woodpecker; the back is black, with white disposed in waves or rather scales on the great quills of the wing, and these two colours form, when it is closed, a checked bar: the under surface of the body is white, variegated on the sides with black scales; two white streaks stretch backwards, one from the eye, the other from the bill; and the top of the head is red.

The figure of this bird agrees perfectly with Brisson's description of the *variegated Cayenne woodpecker*, except that the former has four toes as usual, and the latter only three. We cannot therefore doubt the existence of three-toed woodpeckers: Linnæus describes one found in Dalecarlia; Schmidt, one in Siberia; and we are informed by Lottinger that it occurs in Switzerland. The three-toed woodpecker appears therefore to inhabit the north of both continents. Ought the want of the toe to be regarded as a specific character, or considered as only an accidental defect? It would require a great many observations to answer that question; but it may be denied that the same bird inhabits also the equatorial regions. Synonymes.---*Picus tridactylus* var. *Linn. Gmel. &c.* Southern three-toed woodpecker, *Lath.*

THE WOODPECKER CREEPERS.

THESE birds, of which there are two species, appear manifestly discriminated, and constitute the intermediate link between the woodpeckers and the creepers. The first and largest species resembles the creepers by its curved bill; and the second, on the contrary, is more analogous to the woodpeckers, since it has a straight bill. Both of them have three toes before and one behind, like the creepers; and at the

same time the quills of their tail are stiff and pointed, like the woodpeckers.

The first is ten inches long; its head and throat spotted with rufous and white; the upper side of the body, rufous, and the under side, yellow, striped transversely with blackish; the bill and feet black. The second is only seven inches long; its head, neck, and breast, spotted with rufous and white; the under-side of the body is rufous, and the belly rusty brown; the bill grey, and the feet blackish.

Both these birds have very nearly the same natural habits; they creep against trees like woodpeckers, supporting themselves by the tail; they bore the bark and the wood with much noise, and they feed upon the insects thus detected: they inhabit the forests and seek the vicinity of springs, and rivulets. The two species live together, and often on the same tree, on which many other small birds are perched; yet they are only fond of each other's society, and never intermix the breed. They are very agile, and flutter from tree to tree, but never perch or fly to a distance. They are commonly found in the interior parts of Guiana, where the natives of the country confound them with the woodpeckers; which is the reason that they have received no appropriated name. It is probable that they inhabit the other warm climates of America, though no traveller has mentioned them.

The other species of woodpeckers more recently discovered, are as follow: The buff-crested woodpecker, *picus melanoleucos*; from Surinam. The red-breasted woodpecker, *picus ruber*; from Surinam. The white-rumped woodpecker, *picus obscurus*, from North America. The striped bellied woodpecker, *picus fasciatus*; from Otaheite. The red-winged woodpecker, *picus miniatus*; from India. The Malacca woodpecker, *picus Malaccensis*. Its tuft and shoulders are scarlet; its throat reddish-yellow; its

540 NATURAL HISTORY

tail black. The gold-winged woodpecker, *picus cafer*; from the Cape of Good Hope. The crimson-breasted woodpecker, *picus olivaceus*; from the Cape of Good Hope. The Chilian woodpecker, *picus pitius*. It is brown, with drops of white; its tail short. It has the appearance of a pigeon. It is said not to nestle in hollow trees, but on the banks of rivers and the sides of hills, and to lay four eggs. Its flesh is esteemed by the natives.



INDEX.

I N D E X.

- A** MAZON Parrots, 252; yellow-headed amazon, 254; red-headed and white-headed, 256; yellow, 257.
- ANI**, 310-314; Savanna, 313; mangrove, 314.
- BEEF-EATER**, 309; African beef-eater, 310.
- BELON**, the first modern ornithologist, 9; followed by Ray and Willoughby, 10.
- BIRDS**, general remarks on their food and habitation, 12; the different authors who have treated of them, 13; their external characters, 14-24; feathers, 15; wings, 17; feet and toes, 18; organs of sight, 19; hearing and smelling, 20; imitating sounds, 21; flight, 24; various regions they inhabit, 27; plumage, 28; migrations, 29; whether some pass the winter in a dormant state, 35; their food, 39; size, 40; longevity, 41; moulting, 42; fidelity to their mates, 44; fertility, 46; nestling, 48; incubation, 49; care of their young, 51; general uses, 53, &c.
- BUCCO**, the Barbet, 426-433; spotted, 426; red-headed, 427; collared and elegant, 428; black, yellow-throated, and black-throated, 429; black-breasted, 430; little and Chinese, 431; green and Asiatic, 432.
- BUTCHER-BIRD**, or Shrike, the last kind of rapacious birds, 178; feared even by the larger birds of prey, 179; great cinereous shrike, 180; woodchat, or rutilous shrike, 183; collared, or smaller butcher-bird, 184; fork-tailed, 186; Bengal, and Langarien, 187; the Cayenne, yellow-bellied, and hook-billed, 188; the rufous, white-headed, and Barbary, 189; Madagascar, crested, and Antigua or smallest, butcher-bird, 190; jocosé and rock shrike, 191; faustus, or white-wreathed shrike, 192; Dominican or pied, and nengeta or Surinam, 193; tyrant, 194.
- BUZZARD**, 127; various species, 128; honey-buzzard, 129; martin, 130; soubuse, 131; harpy, 132; moor-buzzard, 133; caracara, 134; ash-coloured buzzard, 135; curious anecdotes of one, 201.
- CARACARA**, a sort of sparrow-hawk, 135.
- COCKATOO**, white-crested, 205; yellow-crested, 206; red-crested, and little flesh-billed, 207; black, 208.
- CONDOR-VULTURE**, 66; method of taking them, 68; size and fierceness, 69, 70.
- CRICK-PARROT**, with yellow throat, 259; mealy, and red-and-blue, crick, 261; blue-faced and Cayenne crick, 262; blue-headed, 263; violet-headed, 264.
- CROW**, distinctive character, 315; chough, or red-legged crow, 328; hermit crow, 329; carrion crow, 331; royston or hooded crow, 334; Senegal crow, 337; Jamaica crow, 338. See Rook, and RAVEN.
- CUCULUS**, the Cuckoo, 433-501; common cuckoo, 433-466; crested cuckoo of Africa, 466; Abyssinian and Cape touraco, 469; great spotted cuckoo, 470; black-and-white crested, 471; green and crested of Madagascar, 472; Egyptian, 473; Senegal, 475; Indian spotted, and variegated of Mindanao, 476; honoratus, or sacred cuckoo, 477; Cape cuckoo, and brown variegated with black, 478; rufous, spotted, and Chinese spotted, 479; radiated, 480; crested of

- of Coromandel, and yellow-bellied, 481; black Oriental, and black Indian, 482; gold-green and white, and paradise, 483; coloured of Coromandel, 484; Chinese, 485; blue, and honey, 486; African, 488; Panayan spotted, 489. American cuckoos, 490-501; rain cuckoo, 490; Carolina, and Mangrove, 491; long-bellied, 492; Brazilian crested, 494; laughing, 495; horned, and variegated brown, 496; St. Domingo, 497; Cayenne, 498; black of Cayenne, and little black, 499; Brazilian, 500.
- CURUCUI, 421-426; red-bellied, 421; yellow-bellied, 423; violet-hooded, 424.
- EAGLE, 81-108; general remarks, 81-87; golden, 87; ring-tail or common, 90; rough-footed, or spotted, 93; cinereous, 95; white-tailed, 96; bald, 97; osprey, 98; sea, 99; gallicus, 101; Malabar or Pondicherry eagle, 103; Oroonoko or crowned eagle, 104; Brazilian, 106; fishing, 107; of the Antilles, 108.
- FALCONRY, history of, 108-113.
- FALCONS, or Hawks, 108-150; gerfalcon, 114; common falcon, 117; lanner, 118; sacre, 120; black, and red, 121; Indian, 122; fisher, 124; stone-falcon, and merlin, 146; new species, 148.
- GALLICUS, or White John, 101.
- GOS-HAWK, larger than the sparrow-hawk, 138.
- GRACULA, the Grackle, 402-410; religiosa, 403; bald, 404; crested, 405; boat-tailed and Barbadoes, 406; paradise, 407; newly-discovered species, 409.
- HARPY, red harpy, or red buzzard, 132.
- HOBBY, a kind of falcon, 142.
- HORNBILL, 300-309; rhinoceros, 300; black-billed, 301; Manilla, 302; Panayan, 303; Indian, 304; pied, 305; African and Abyssinian, 307; Philippine, 308; round-helmeted, 309.
- JACK-DAW, 342; a bird of passage, 343; sometimes white, 344; Alpine daw, 345; mustachio, and bald daw, 346; New Guinea and Papuan, 347; colnud, or bare-necked, 348; bal-cassio, or Philippine, 349.
- JAY, 358; red-billed, 361; Peruvian, and brown, 362; Siberian, 363; yellow-bellied, 364; blue, 365; nut-cracking, 366.
- KITE, common, 125; American, 126; black, 127.
- LORIS, a species of Parrot, 219; noira-loris, 220; varieties of the noira, 221; collared lory, 222; crimson, 223; red, red-and-violet, and great, 224; red parrakeet and violet-and-red parrakeet, 225; tricolor parrakeet, 226.
- MACAWS, 242-252; red, 243; blue, 247; green, 248; black, 250.
- MAGPIE, 349; its imitative powers, 350; white, 353; Senegal, and Jamaica, 353; Antilles, and Mexican, 356; Vardiole, 357; Zancoe, 358.
- MOTMOT, a species of the ramphastos, 298.
- ORIOLE, 377-402; golden, 378; Chinese, and Bengal, 381; Indian, and Icteric, 382; Mexican, and ring-tailed, 384; Japacani, and Brazilian, 385; New Spain, cinereous, and red-winged, 386; black, 388; little black, and black-capped, 389; spotted, and olive, 390; weaver, 391; whistling, 392; Baltimore, 393; spurious Baltimore, 394; black-and-yellow, and red, 395; green, and crested, 396; Louisiana and Bonana, 397; lesser Bonana, 398; hang-nest, 399; yellow-winged, yellow-capped, and olive of Louisiana, 400; kink, 401; striped-headed, 402.

OSPREY,

OSPREY, or bald buzzard, 98.

OWL, distinguishing character, 150; peculiar formation of the organs of sight, 150, 151; not all equally tender-sighted, 152; great horned owl, 153; formerly used in falconry, 155; the long-eared owl, 159; scops, or little horned owl, 161; aluco, or black owl, 163; tawny or screech owl, 164; white owl, 166; brown, 168; passerina, or little owl, 170; cabure owl, 172; funerea owl, 173; harfang, or great white owl, 174; Cayenne and Canada owl, 176; St. Domingo owl, 177.

PARADISE, the Birds of Paradise, 410-420; apoda, or greater bird of paradise, 410; king bird of paradise, 415; magnificent, 416; superb, 418; golden, 419; blue-green, 420.

PARRAKEETS of the old continent, with long tails, 226-236; with short tails, 236-242; great collared parrakeet, 226; double-collared and red-headed, 227; blue-headed and lory, 228; yellow, azure-headed, and mouse, 229; mustachio and blue-faced, 230; lace-winged and rose-ringed, 231; little, with rose-coloured head, 232; long-shafted and red-winged great parrakeets, 233; red-throated, *ibid.* black-banded great parrakeet, 234; red-and-green, and crested, 235; blue-headed and red-headed, 236; coulacissi and golden-winged, 238; grey-head and variegated, 239; blue-winged, collared, and black-winged, 240; arimanon, 241. Of the new continent, with long tails, 274-283; pavouane, 274; brown throated and variegated-throat, 275; variegated-wing and anaca, 276; jendaya, emerald, and fincialo, 277; red-breasted, 278; yellow-faced, 279; golden-crowned, 280; guarouba and yellow-headed, 281; ara, 283. Touis, or short-tailed parrakeets, 283-286; yellow-throated and fosove, 284; tirica and ete, 285; golden-headed, 286.

PARROT, 197; ancient history of it, 199; how taught to speak, 200; their food, 203; ailments and longevity, 204; those of the old continent, 205-273; cinereous, 208; green, 215; variegated, 216; black and mazarine, 217; bloody-billed and grey-headed, 218; green of Botany-bay, 218; loris, 219. See LORIS, PARRAKEET, and MACAW. Amazon parrots, 250-257; aourou-couraou parrot, 257; crick-parrots, 259-265. See AMAZON and CRICK. Popinjays, 265-271. See POPINJAYS. Paragua and massouri parrots, 271; caica parrot, 273.

PIGEON-HAWK of Carolina, 141.

POPINJAYS, 265-271; paradise and mailed, 266; tavoua, 267; red-banded, purple-banded, and blue-headed, 269; violet and fassibe, 269; brown, and Aurora-headed, 270.

RAMPHASTOS. See TOUCAN.

RAVEN, 315; how regarded by the ancients, 316; anecdotes, 317; food, 319; constant to their mates, 320; longevity, 322; plumage, 325; Indian raven, 326.

RAPACIOUS BIRDS, 59, &c.

RAY's classification of birds, 10, 11.

ROLLER, 369-376; garrulous, 369; Abyssian and Senegal, 372; Angola and Mindanao, 373; Oriental, 374; Madagascar, Mexican, and Chinese, 375; Cayenne, 376.

ROOK, 338; its habits and food, 339; breeding, &c. 340.

SACRE, a kind of falcon, 120.

SAINT MARTIN, a kind of buzzard, 130.

SHRIKE. See BUTCHER-BIRD.

SOURUSE, or Ring-tail, 131.

SPARROW-HAWK.

SPARROW-HAWK, with an account of its migration, 136; of Cayenne, 141.

TOUCAN, 288-299; general remarks on the species, 288; yellow-throated, 291; Brazilian and red-bellied, 293; collared and pavinine, 294; aracari and green, 293; piperine and black-billed, 296; blue, and white-breasted, 297; motmot, 299.

VULTURE, 65-81; distinguishing character, 65; gryphus, or condor, 66; king, 70; Egyptian, 72; carrion, 73; secretary, 76; brown, 77; cinereous, 78; crested and golden, 79.

WATTLE-BIRD, only one species, 315.

WILLOUGHBY, an English writer on birds, 9.

WOODPECKER, 505 to the end; green woodpecker, 508; green, and spotted green, of the Philippines, 513; green of Goa, and spotted of Bengal, 514; green of Bengal, Cape, and green and striped of Senegal, 515; Persian and orange, 516; striped and passerine of St. Domingo, 517; great and little striped of Cayenne, 518; yellow of Cayenne, 519; ferruginous and black-breasted, 520; rufous, 521; little yellow-throated, and gold-winged, 522; black, 523; Carolina, 526; pileated, 527; lineated, 528; red-necked, and lesser black, 529; red-headed, and greater spotted, 530; lesser spotted, 532; Nubian and cardinal, 533; brown spotted, Canadian, and varied, 534; Jamaica and Louisiana, 535; of Encenada, and hairy, 536; little of Virginia, and variegated of Carolina, 537; variegated undulated, and woodpecker creepers, 538; recently-discovered species, 539.

WRYNECK, 501; minute woodpecker, or wryneck, 505.

YUNX, the Wryneck, 501-505.

END OF THE FOURTH VOLUME.

